

THE OTHER SIDE

ON THE editorial page of the June issue of this journal we printed, under the heading "WANTED," a letter we had received from a prominent architect, and commented upon the need for the qualities he called for in the man he was seeking to fill a position of importance in his drafting room, particularly the element of personality.

This aroused a great deal of interest among our readers and we have received letters from all parts of the country commenting upon this letter. The architect's letter stated *his* requirements, his side of the case. In reply a number of draftsmen have presented *their* views on the situation and stated their requirements—the other side.

As a matter of fact, the draftsman, as a rule, simply shares the fortunes of the architect. Uncertainty of employment is the lot of both in most cases, as is an inadequate income, considering the amount of preparatory training each undergoes. The general situation in the architectural profession can be improved only slowly, by constructive methods.

We believe that it will help towards improvement if both architects and draftsmen give open minded consideration to both sides of the question—for, after all, they are dependent upon each other.

From the letter of one draftsman we quote the following:

"The fictitious 'ad' and your comment on the first page of PENCIL POINTS for June naively assumes the omniscience of the architect-employer and gratuitously imposes on the architect-employee the burden of proof for 'common sense, level-headedness, experience and practicality.'

"Disregarding the contradiction that your correspondent could have become 'foremost' without the collaboration of such men as he says he is still looking for, I volunteer to tell your 'foremost architect' how to find his *nonesuch*. * * * From these is extracted for mere wages the products of creative efforts of a high order without warming them with a ray of the glory or fame in the results achieved.

"Sensitive, as artistic temperaments usually are, to the salve of approbation, they are expected to act the alter ego role with absolute self-effacement. Underlings at pay time, but lords during the sweat that changes an idea into a reality, their situation is an inconsistency. In most cases their position is

precarious, inasmuch as they are hired as 'supers'; and however meritorious their performance, every time the curtain rises they find themselves under new management.

"Now if we are going to profit by your intervention, please advise your correspondent to advertise not for a draftsman—that's too archaic—but for an associate,—or two, or three, if his 'foremost' is ample enough—to take care of his drafting room. Then even without mincing his requirements of 'engineer' and 'artist,' without which, by the way, no one could possibly have a 'thorough-going knowledge of building practise' he will get 'God-sends' galore. Many a new office will be glad to close down; many an old staff will disintegrate; and many a high salary will be willing to shrink for the opportunity of expanding one's ego and manifesting that power latent in every worthy architect-employee, the 'element of personality in its true proportion.'

The writer of the above letter also expresses the conviction that a man who checks over the work of others in the way required is almost certain to have the dislike of the men whose work he criticises. In this connection it is interesting to read a letter from another draftsman who so greatly admires and likes the man who checks his work and the work of the other draftsmen in his office that he has written to us asking that we bring this man to the notice of the architect who has this position open. This is still another side and we print extracts from this letter below:

"I think most draftsmen read with more than the usual amount of interest your article called "Wanted" in the June number of your publication.

"It was natural after reading such an article to think of the qualifications and of the shortcomings of the many draftsmen I have come in contact with during five years spent in offices since leaving college, and to weigh them against the requirements set forth by the architect mentioned in your article.

"I have worked in several large offices where it was necessary to keep a number of men who did nothing but check the drawings made by other draftsmen. These men have usually been men of wide practical experience, little academic training in architecture, who have neglected to learn the first thing about tact, diplomacy, and agreeable personality development.

PENCIL POINTS

"The average draftsman has many things to worry and to annoy him during the day, and is easily "riled" by some checker who finds a mistake and who brings it in with a glow of triumph like one who is showing the waiter a hair he has found in his soup. I have often wondered why most men who hold such positions are constituted that way, and after many battles with the species, I have often wondered why more agreeable men are not selected for checking work, so that there may be less of disturbance and more of co-operation.

"We have heard that a rose to the living is better than a wreath to the dead, so I am taking advantage of the opportunity to mention the fact that in our large office there is a man who fills all the requirements outlined in your article from the viewpoint of the draftsmen in the office. So far as I know his work is liked by our employers, but I know that the draftsmen are always contented to have him check their work; because they not only feel certain that no error will get by him, but they know that he is always ready to suggest some short-cut, some simpler solution to a problem, and does it all in a gentlemanly, diplomatic way. This letter will probably result in nothing more than the waste of a few moments of your time spent in reading it, but I shall not have missed an opportunity to speak of a man whose work I admire."

For the convenience of readers who do not happen to have the June issue at hand we reprint below the essential part of the letter that started this discussion:

"Do you know a competent, practical architectural draftsman whom I can get to come into my drafting room and act as a sort of general censor of practical working details, a man whose mental attitude is such that he can keep good feeling among the draftsmen he comes in contact with and at the same time check over their work and aid in systematizing it, prevent errors of a practical kind and instruct them, where necessary, in standard, economical, and practical ways of doing the job? He does not have to be an engineer or an artist. He simply has to be a common-sense, level-headed, experienced, practical draftsman who has a thorough-going knowledge of good building practice. If you can tell me of such a man, I shall be glad to take him on, for he would be a God-send to this office."

We want to know what you think about this matter. Won't you write us a letter?

CONSTRUCTION DETAIL NUMBER

DETAILS of building construction are of so much importance in drafting room work that we have decided to devote an early issue of PENCIL POINTS to this subject—to bring out a "Construction Detail Number." It is our idea to prepare this number by the same method that made our "Specification Number" (January, 1923) so great a success. The idea is simply to present the best ideas worked out by readers in all parts of the country, to carry on our established policy of editing PENCIL POINTS *with* rather than for its readers.

Consequently, we invite you to send in drawings of one or more details of construction that you have used in actual practice and found satisfactory. From among the details sent in in this way we shall select for publication the ones we believe will be of the greatest use to our readers. The architect supplying the detail will in each case be credited by mention in connection with its publication. We hope that most of those who send in details may find it possible to prepare the drawings in such a way that they will not have to be redrawn for publication. Since the drawings in Knoblock's "Good Practice in Construction" have reproduced especially well, it is suggested that the manner of drawing shown in the plates of that book be followed in the preparation of drawings for the "Construction Detail Number." The plates in Mr. Knoblock's book were drawn at twice the size of the engravings. That is, they were drawn 14 in. x 19 in. and reduced by the engraver to 7 in. x 8½ in., measured on the border line. All the lines were drawn twice as thick as they appear in the book. They were drawn in pencil, then traced on tracing cloth in black drawing ink.

As we wish to publish in this issue a wide range of construction details we shall be glad to have details of small buildings such as frame houses, and cottages as well as buildings of medium and large size.

As we wish to present this material as soon as possible, will you please prepare your contribution and shoot it along to us. The more contributions, the better for everyone, because more helpful ideas can be drawn from a big fund of material for the improvement of the practice of building construction. Now, let's go!

THE GEORGIAN PERIOD

THE new edition of "The Georgian Period," just brought out by the U. P. C. Book Company, Inc., 239 West 39th St., New York, is one of the most useful books an architect can have. Ever since 1898 "The Georgian Period" has been regarded as the most important, authoritative source of design inspiration for architectural work in the manner of Colonial days, for in it are preserved accurate records of Colonial houses, churches, and public buildings in the form of detailed and measured drawings and photographic reproductions. More than one hundred architects, originally contributed to this monumental work under the careful guidance of William Rotch Ware. The new edition has been arranged and indexed with a view to making it especially convenient for reference in the architect's office. The work is in six art portfolios, size 10 in. x 14 in., 454 full-page plates and measured drawings, 272 pages of text with 500 illustrations. The price is \$60, postpaid. It can also be had in three bound volumes (buckram) at \$75 the set. It is also sold on a partial payment plan.

THE TECHNIQUE OF RENDERING, PART I.

BY FRANCIS S. SWALES

In the serial article of which this is the first installment Mr. Swales explains practical methods of rendering. These methods, though based on what may be regarded as standard practice include variants that have been found effective in actual work. In preparing this article Mr. Swales has drawn freely upon the fund of experience he has gained in making renderings of innumerable important works as well as upon his training in Paris. For the purpose of making this article as helpful as possible, examples in wash are reproduced here at the full size of the originals and with the closest possible approximation to the tone gradations of the drawings. Some of these examples illustrate common faults in rendering, while the text explains how the trouble can be avoided.—Ed.

TECHNIQUE is that combination of mechanical skill and knowledge with personal peculiarities in performance which makes style. The great bulk of that which passes for art is merely technique. It is something which can be taught—something which anybody can acquire by observation and practice, and in its best use it is the very important vehicle of art itself.

According to O. Henry, "Nature moves in circles; art in straight lines." "Beauty," he says, "is Nature in Perfection; circularity is its chief attribute. On the other hand, straight lines show that Nature has been deflected. Imagine Venus's girdle transformed into a 'straight front'."

It is interesting to find a brilliant and popular writer contending, no matter how humorously, that art is an unbeautiful deflection of Nature and a matter of straight lines. O. Henry was leading up to a demonstration that the architecture of New York was the cause of a change of nature of certain of his heroes.

Oscar Wilde and Whistler charged that Nature is seldom beautiful unless aided by the ideals and work of artists—which is better humor than O. Henry's, because they were serious, and believed themselves to be artists—but neither of them seems to have considered "straight lines" as the path in which art moves.

To architectural drawing and rendering Kipling's conundrum of the workshops, "it's clever, but is it art?" may be applied, and answered variously; but as to technical qualities, the work of our best American delineators ranks high among the best that has ever been done. Whatever conduces to bring into existence the expression of the ideals of the artist or helps to discover his talent or, possibly, genius, is a matter of no small concern to any lover of the beautiful. Ideas and feeling form the substance of a work of art—without them it cannot be produced. But, unless other people can recognize in a work the mystery of their own conception of beauty and unless the ideas are conveyed the work will have no message for those who can appreciate but cannot themselves create. Technique is a means of artistic expression and should be understandable to even those who have the least artistic perception.

"We are accustomed to consider architecture," says Herman Grimm, "as that art which is most nearly allied to mechanical skill." Leonardo da Vinci laid down the rule that, the less resistance afforded by the material which is worked, the

higher is the art. According to this, therefore, the painter stands higher than the sculptor, the sculptor is better than the architect, the poet is superior to the painter. To carry the argument another step: the draftsman with only a chunk of charcoal and how to use it standing between him and self-expression, holds the "altitude record" above the whole lot.

Charcoal, as the material affording the least resistance to working, is the most facile means by which the beginner may discover his power of draftsmanship. If every draftsman could begin his studies with the knowledge that comes from several years' experience, each probably would choose charcoal as the medium and the plaster cast from the antique as the model from which to obtain the groundwork of form, color value of objects, and gradations of light, shade and shadow. A year or two of practice with charcoal forms a habit of arm, hand and finger movement which is free from cramp or hard-fistedness. Drawing from the white model tends to lightness of touch. Also, to the observation that a consistent width of line and of white space between the lines is the fabric of technique; that brilliant and luminous effect is due to the light reflected from the paper or white spaces between the lines and from light surfaces and "high lights" between darkened areas, and clearness of expression is the result to be sought. Such observations apply to all methods and media—whether the method is free as in a pencil or pen sketch or tight and hard as in a Raguinet engraving, loose as in a watercolor, or solid as in an oil painting. Lines are, theoretically, merely the boundaries of surfaces, and it is the surface—the space between the lines—that is the important consideration. The line itself is secondary.

This is obvious in such finished wash drawings as the details of the Cori Temple, by Emanuel Brune (Figure 1), and of the Museum at Nantes, by M. Joso (Figure 2). Though not so obvious it is still clearly to be seen in the simply rendered drawings of everyday practice such as the Club House façade by Mr. Rodman (Figure 3). It is less apparent when one considers a drawing such as the post-colonial house (Figure 4), which is a "line drawing," but if note is taken of the method of retaining the importance of the fenestration, and the delicate detail of the entrance and cornice, it will be seen that, even in such drawing, it is the white spaces between the lines, that count most. The ornamental sash bars of the fanlight and side

PENCIL POINTS



Figure 1. Detail of The Cori Temple, Wash Drawing by Emanuel Brune.

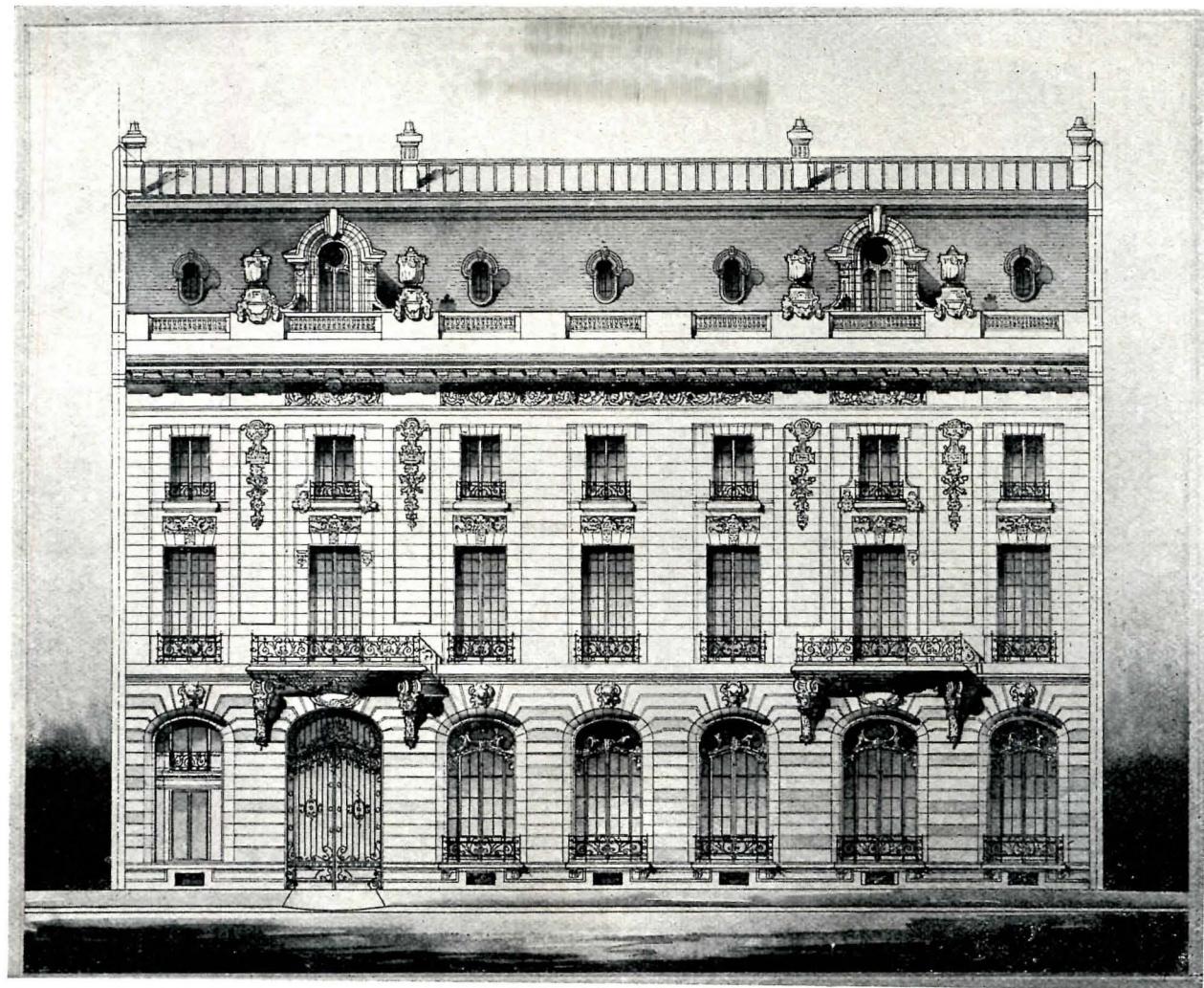


Figure 3. Club House. Carey Rodman, Architect.

lights of the doorway are outlined and the "white line" between is the paper surface which defines the width of the sash bars. Here is a point of technique to note: the outline of the bars becomes part of the poch  when the poch  is put in to indicate the glass. If that fact had not been borne in mind when the outlines were drawn, it is probable that the white line would have lost in width. This drawing was made twenty-five years ago and, had the bars been drawn in with Chinese white, it is probable that they would have disappeared long ago. The disadvantage of Chinese white or any color containing it, is that it powders and separates from the paper. Drawings of this kind (Figures 4 and 5, which are reproduced at the actual size of the original drawings) serve to indicate a practical limit of fineness of technique for purposes of reproduction. The free-hand lines of the drawing of the semi-elliptical casing are as fine as will stand up on reproducing plates, and also about as fine as can be obtained by the use of the finest full-size (not crow-quill) pen made that is suitable for drawing.

The quality and width of line and the few "tricks" which are part of every good line drawing (whether free-hand or mechanical) and a few points regarding putting in poch  are the earliest considerations and causes of doubts and questions on the part of the beginner.

Under all circumstances lines should be clear and firm but not necessarily dark in color; usually, but not necessarily, uniform in width. Gradation is the essence of luminous quality and this can often be accentuated, particularly in the case of wash drawings, by the use of a line of diminishing width. Illustration becomes necessary (Figure 6) to point out "what to do," and what to "don't." The illustration is drawn on ordinary sketchblock paper, with an HB pencil. The ink-lines and poch  are made with waterproof black ink and the washes are of ivory black. The points to which it is intended to draw attention are numbered 1 to 9 inclusive. No. 1 shows pencil line graded in intensity from dark at the top to light at the bottom; No. 2 shows ordinary width of inked line for drawings to the scale of two centimetres (one fiftieth full-size) or larger, our

PENCIL POINTS

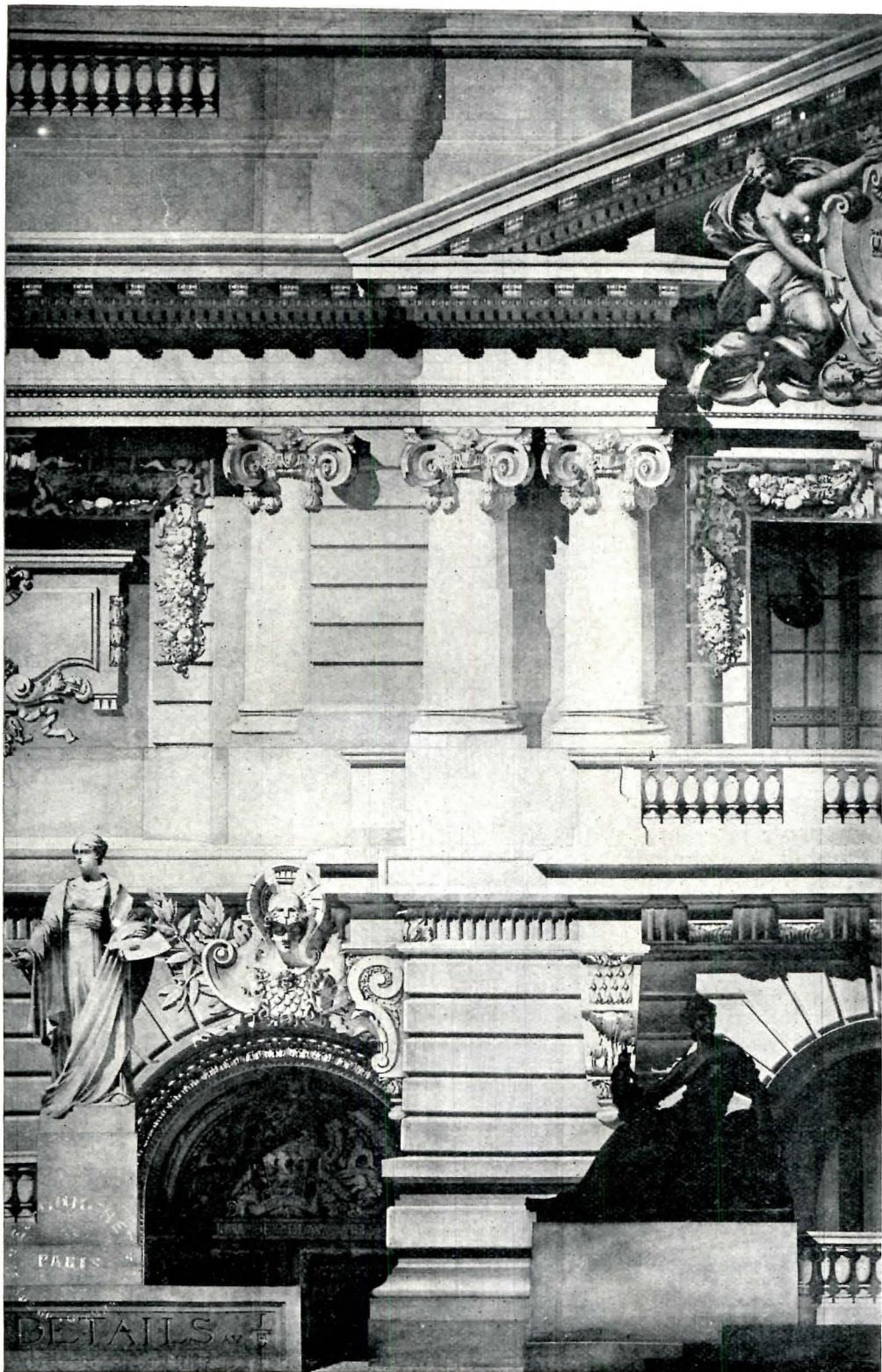


Figure 2. Detail of Museum of Nantes, France. Drawing by M. Joso.

PENCIL POINTS

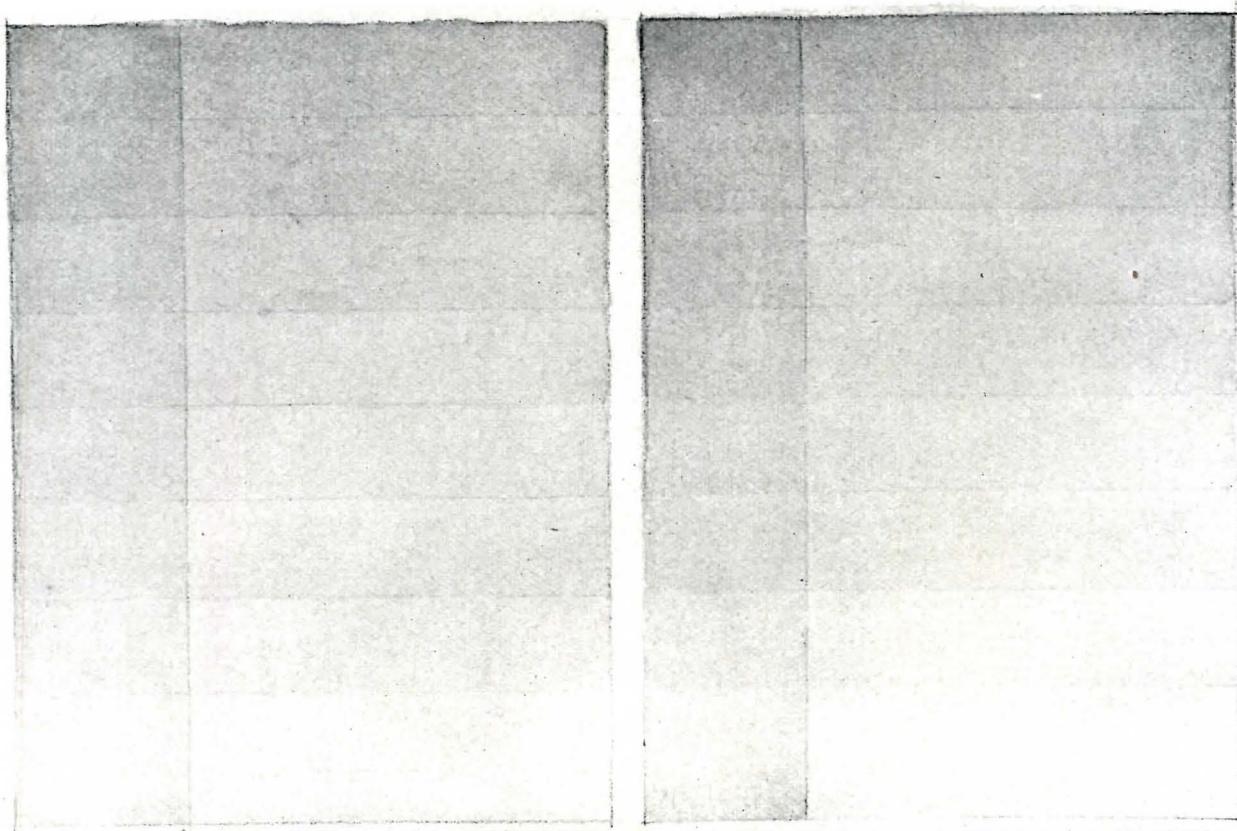


Figure 9.

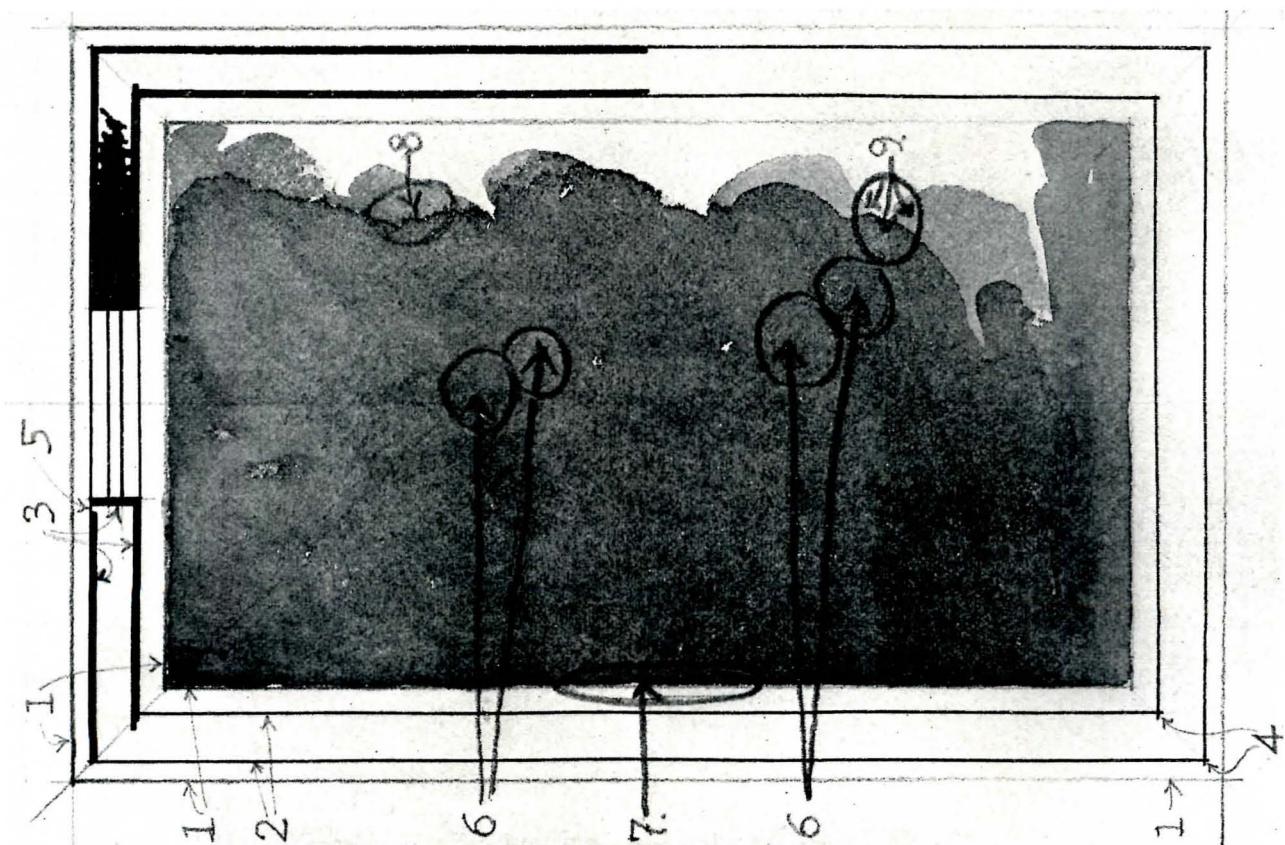


Figure 6.

PENCIL POINTS



Figure 8.

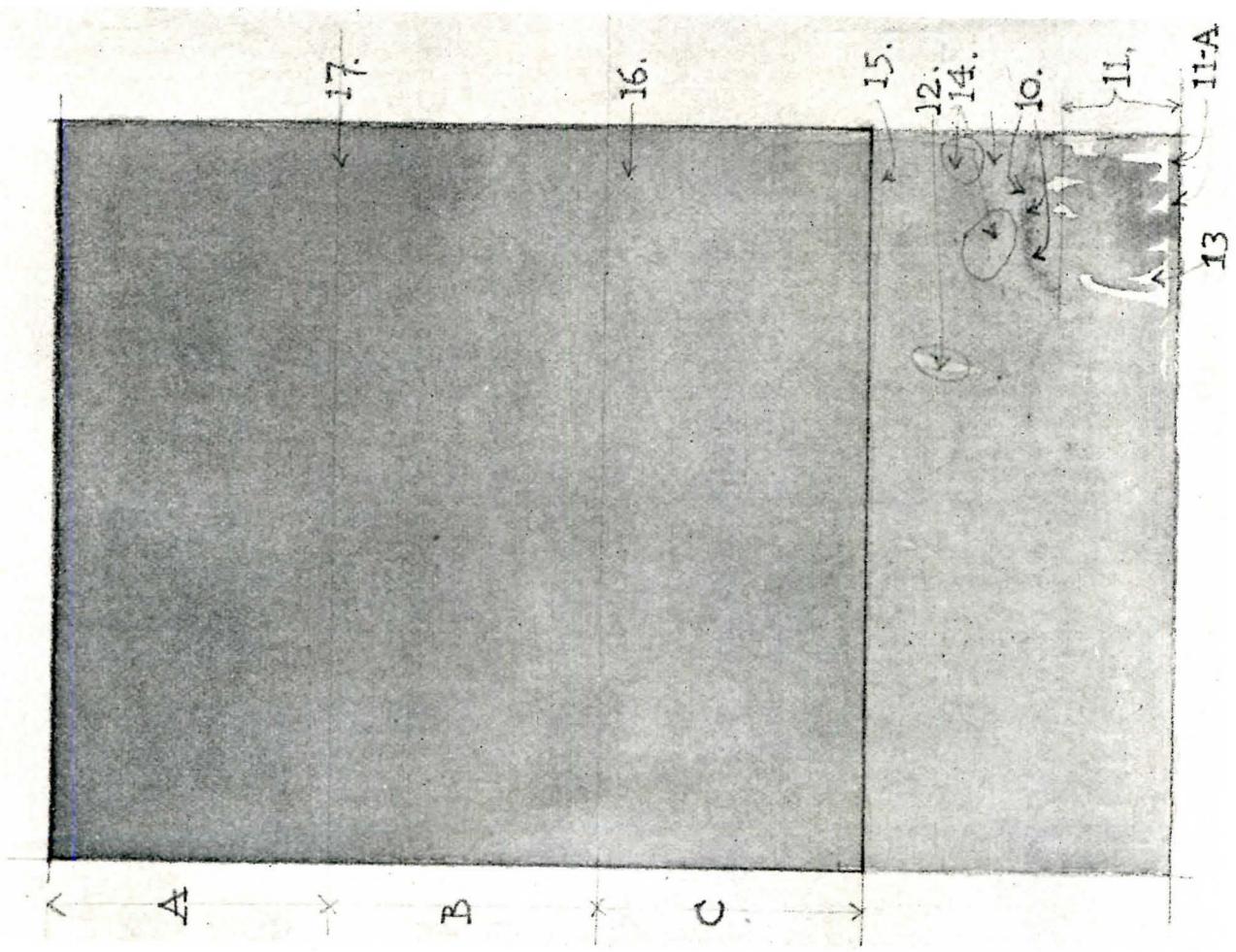


Figure 7.

PENCIL POINTS

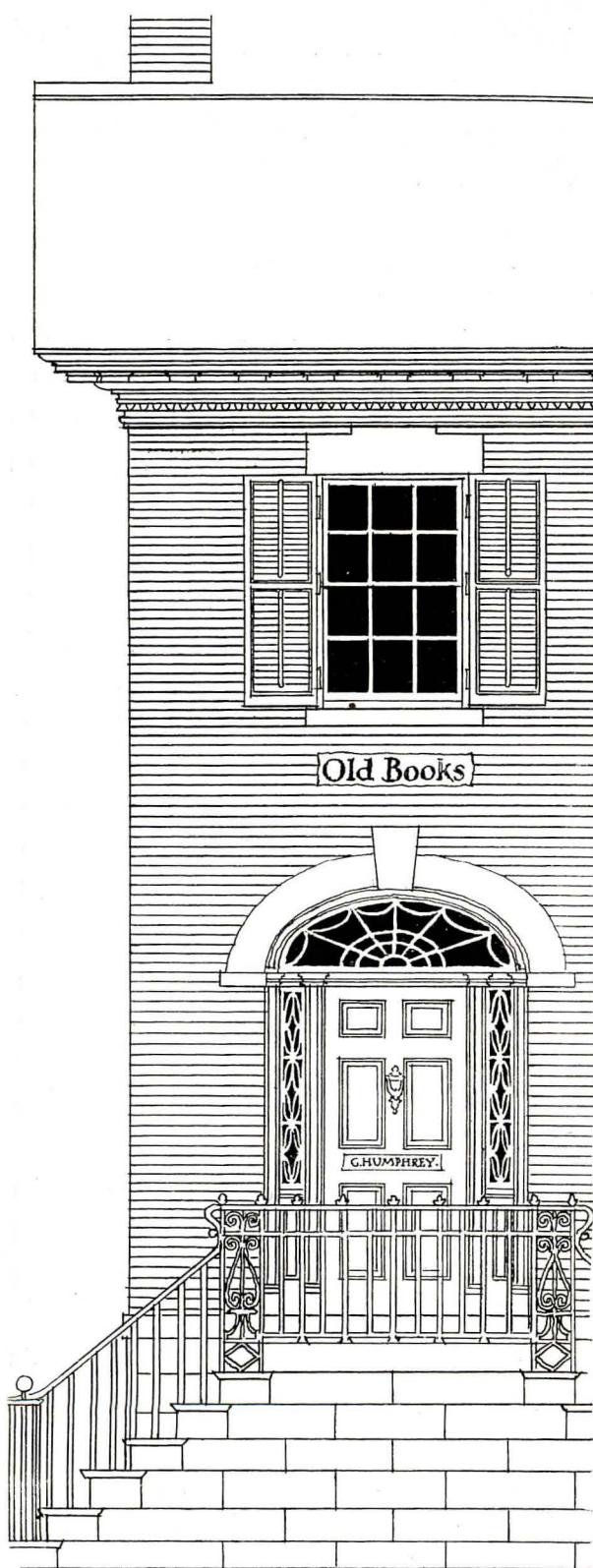


Figure 4. Pen-and-Ink Drawing of a Post-Colonial House, by Francis S. Swales.

$\frac{1}{4}$ -in. scale (one forty-eighth full size) for example. It may be gauged by the width of the markings on any good folding rule. No. 3 shows heavy line ruled within working line as a margin of safety preparatory to completion of poch . Four shows excess length of working lines to secure sharp corners. No. 5 illustrates a heavy line, margin of poch , stopped short of its proper termination to show bad effect of corner if left that way; note also that heavy cross lines, to define openings, are put in first to prevent "run-overs" of lines parallel with wall. Nos. 6 to 9 inclusive illustrate ordinary troubles with heavy washes; No. 6 shows a "lumpy" effect in the wash caused by irregular settlement of pigment due to cockling of paper too thin to stand very wet washes, or, washes too wet for such thin paper. No. 7 shows an irregular, hard line, almost black, formed by two heavy washes, each too wet, carried to the same line. No. 8 shows the edges of two washes. The first contained about the right amount of wetness to permit proper drying and the second contained too much water and dried too slowly, leaving a settlement of excess pigment along the edge. No. 9 shows the effect of running one heavy wash over another without gradation—the method often used to indicate trees in different planes of remoteness.

Figure 7 is an illustration of the handling of graded washes. The pigment is ivory black and the washes are run in the ordinary and orthodox manner as laid down by the late Professor Guadet at the Ecole des Beaux Arts. The gradation is made through three horizontal zones, the height of each being indicated by the dimensions A, B and C, and the bottom zone (which is the same tone as Zone C) was reserved to indicate points to observe, which are numbered and indicated by arrows, as before. Number 10 shows an irregular "worm-track" or "run-back," which is caused by too much wetness at one spot (see also No. 8, Figure 6); a puddle forms, which dries around the edges first, and in doing so attracts particles of the pigment. No. 11 shows the height and kind of brush stroke which is carried across from side to side of the surface washed-in with a series of horizontal rows of such strokes in each successive wash. No. 12 shows an "air-hole"—a place passed over by one of the washes. Frequently such places are purposely left to give texture or vibration to a wash. When left accidentally they should not be retouched. If retouched while wet a "run-back" is likely to be caused; if retouched after drying a patchy effect will result. No. 13 shows the amount of pigment carried down (over the white paper left purposely to show through first wash) by the clear water used to extend the gradation of second wash, covering zones A, B and C, and graded out to the bottom of the lowest zone. No. 14 shows similarly the amount carried down in the third wash, covering zones A and B, at full strength and graded out through the other zones. No. 15 shows an edge formed by the slight amount of pigment picked up by the clear water used to grade out the wash covering zone A at full strength and zone B at half

PENCIL POINTS

strength. In No. 16, the half tone wash was allowed to stand about half a minute before grading out, while in No. 17 the grading was carried through without interruption.

The four last points illustrate the necessity of carrying each wash *over the whole area* in order to avoid edges or streaks, and show that the operation must be continuous, at an even rate of speed. Although a wash may be carried over a large area with clear water, it picks up enough pigment to constitute a light wash which will leave a water-mark or "worm-track," wherever it is allowed to dry. Every wash, however light, should therefore be carried over the *whole area* affected and to a definite line of finish.

Figure 8 shows an ordinary, graded wash made in a single operation. The full strength of color is carried over two or three horizontal movements of the wash, the brush always moving vertically in little dabs. Water is then added to the wash in the *gouge* (color cup) and the wash is carried down another inch or so, more water added in the *gouge*, and so on.

Figure 9 shows a method of giving a graded effect without any actual gradation of the tone. The area is divided into a number of horizontal zones. In this example it is divided into eight zones. The wash is first carried over the whole area and allowed to dry; then a second wash is carried over seven of the zones and allowed to dry; then over six zones, and so on. The area at the left of Figure 9 was washed, with the tilt of the drawing board downward, from dark to light. At the right, the tilt was downward from light to dark. Under a magnifying glass a slightly stronger arris is found between the zones at the left, indicating that a softer grading would result from working from light to dark down the tilt of the board. The tilt tends to cause particles of the pigment to flow downwards towards the edge of the washed area which it is desired to keep darkest. The method to the left is used in the case of fluting to columns; that to the right for curved roofs, large mouldings on quarter-full-size or full-size details. In either of these cases, however, the zones are spaced out

equally on the section, or profile, and projected so as to indicate the curvatures on the elevation by the amount of each zone visible.

The graded wash shown in Figure 8 might have been made in the reverse sense—by beginning with the lightest tone at the top and grading downward to darker tones, adding pigment in the *gouge* instead of adding water.

SMALL HOUSE DESIGN COMPETITION.

A COMPETITION for the Best Design for a House Costing Not More Than \$5,000 is to be held under the direction of the Plans and Planting Committee of the Community Arts Association of Santa Barbara, Cal. Carleton Monroe Winslow, Architect, Van Nuys Building, Los Angeles, Cal., has been chosen as Consultant. The competition is open to everyone.

Those desiring to compete must register with Mrs. O. L. Hathaway, Business Secretary of the Community Arts Association, 936 Santa Barbara Street, Santa Barbara, Cal. Written applications must be received before 6 P. M., August 15, 1923, but such applications postmarked on August 14 will be considered as eligible.

Drawings must be received by the Business Secretary of The Community Arts Association on or before 10 P. M., September 1, 1923. For the convenience of Los Angeles competitors, drawings will be received at the office of the consultant on or before the same hour and date.

The prizes will be as follows: First Prize, \$500; Second Prize, \$200; Third Prize, \$100. There will be five honorable mentions accompanied by prizes of \$20 each, and five honorable mentions without money prizes.

The subject is a dwelling house, suitable for California, of not over five rooms, including living room, dining room, kitchen, two bedrooms and bath (living room and dining room may be combined, but will nevertheless count as two rooms), placed upon an inside lot fifty feet wide, upon the street and building line, and one hundred fifty feet deep, without an alley in the rear, also a garage for one car, which may or may not be separate from the house and placed anywhere upon the lot. The character of the house, such as an exterior of stucco, shingles or clapboards, also the size of the rooms and whether the house shall have one or two stories, is left to the discrimination of the competitor. The drawings must be accompanied by a *bona fide* estimate of cost by a responsible builder. The house must not cost over \$5,000.

All drawings awarded prizes or mentions will become the property of the Community Arts Association. Competition drawings will be exhibited in connection with the Annual Exhibition of Small House Designs of the Community Arts Association, opening September 15.

All who contemplate entering this competition should apply promptly to Mrs. O. L. Hathaway, at the address given above.

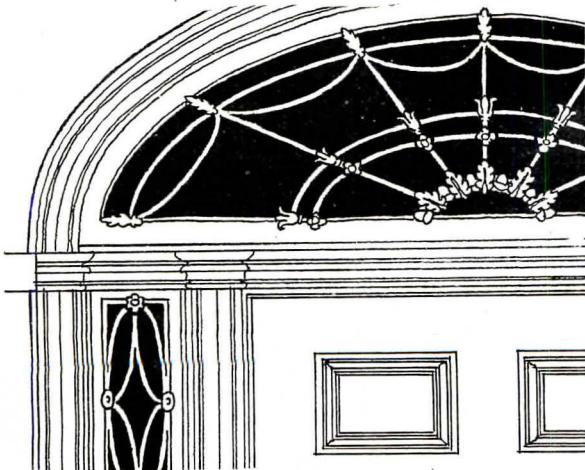
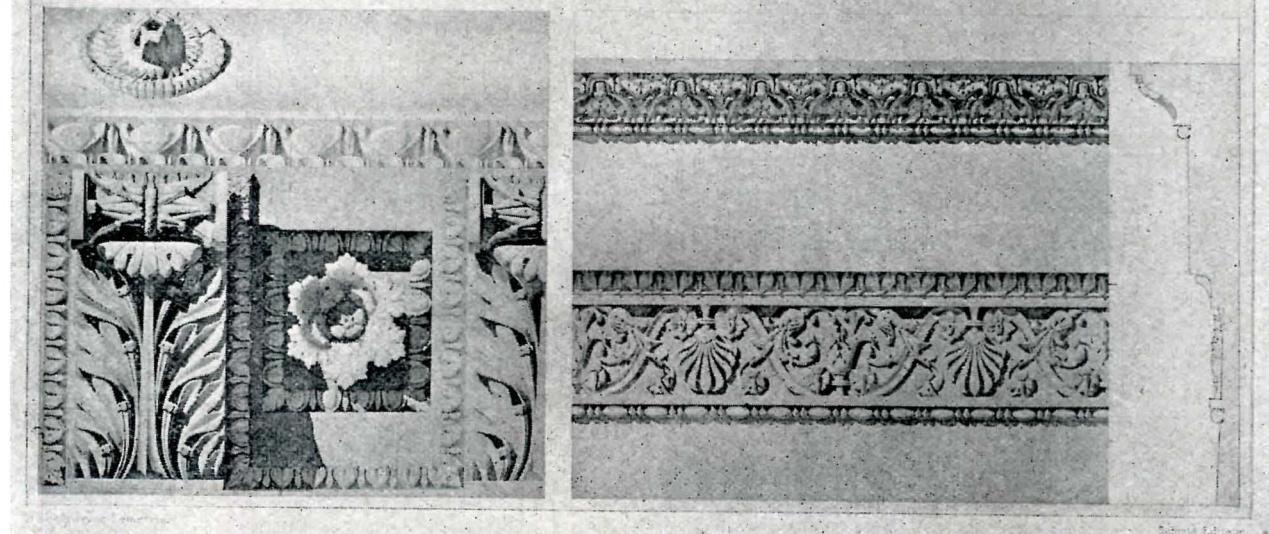
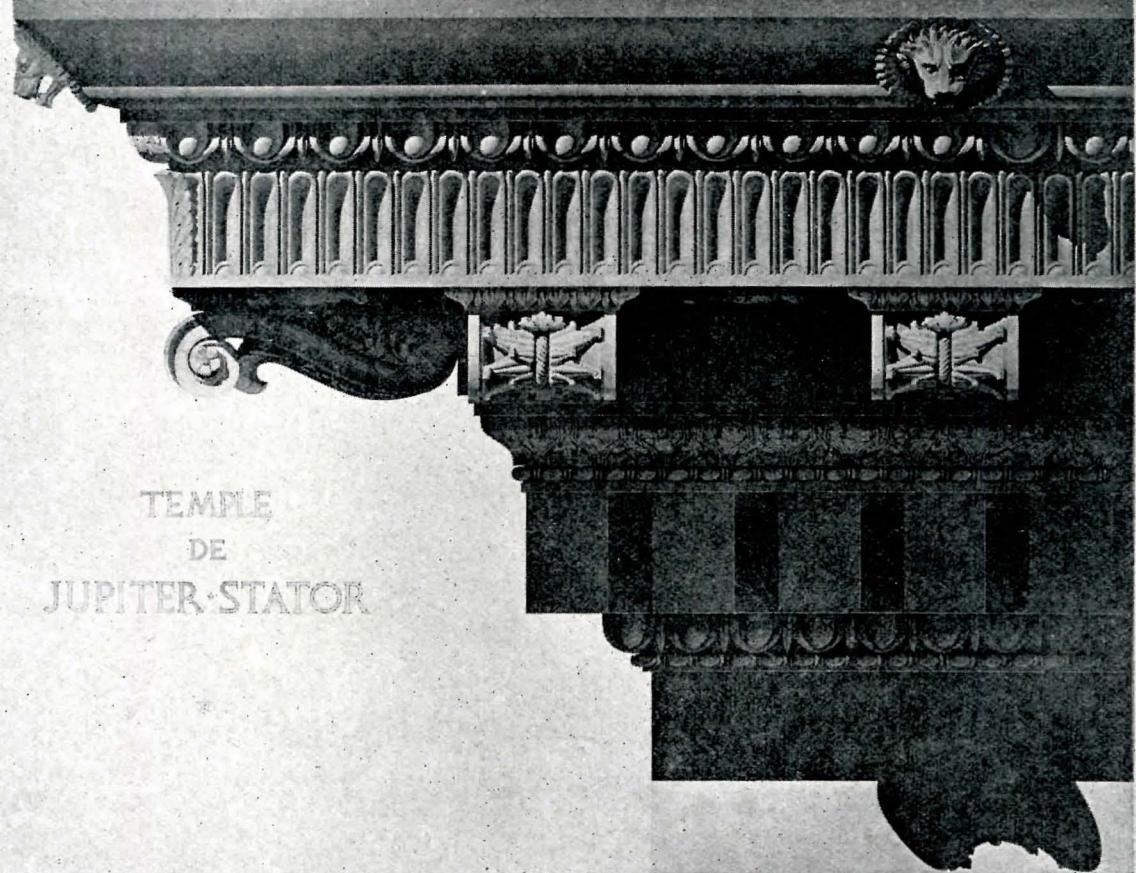


Figure 5.

PENCIL POINTS

VOL. IV, No. 8

PLATE XXIX



DETAIL OF THE TEMPLE OF JUPITER-STATOR, ROME
FROM H. D'ESPOUY'S "FRAGMENTS D'ARCHITECTURE ANTIQUE"

On the other side of this sheet is reproduced an excellent drawing of details from the Temple of Jupiter-Stator, one of the most notable of the monumental architectural works of Imperial Rome. This plate is interesting also as an example of fine rendering. This plate is from the book of one hundred selected plates from D'Espouy, now being brought out by the publishers of this journal.

PENCIL POINTS

VOL. IV, No. 8

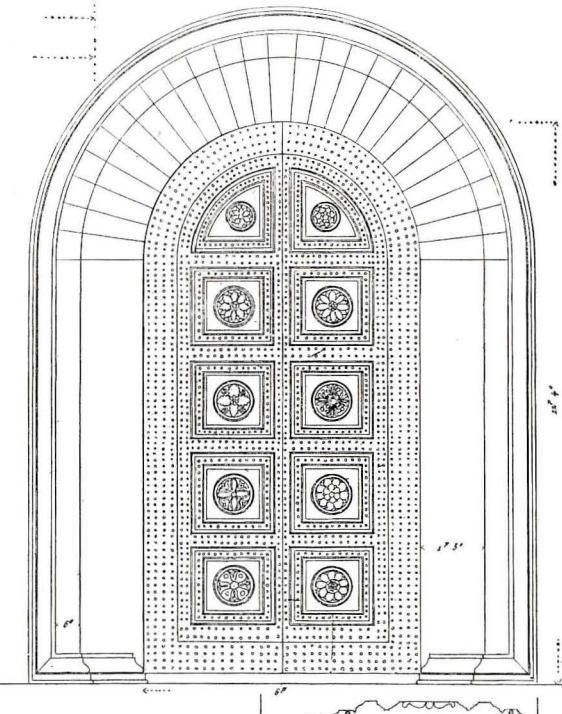
PLATE XXX

PL. 42

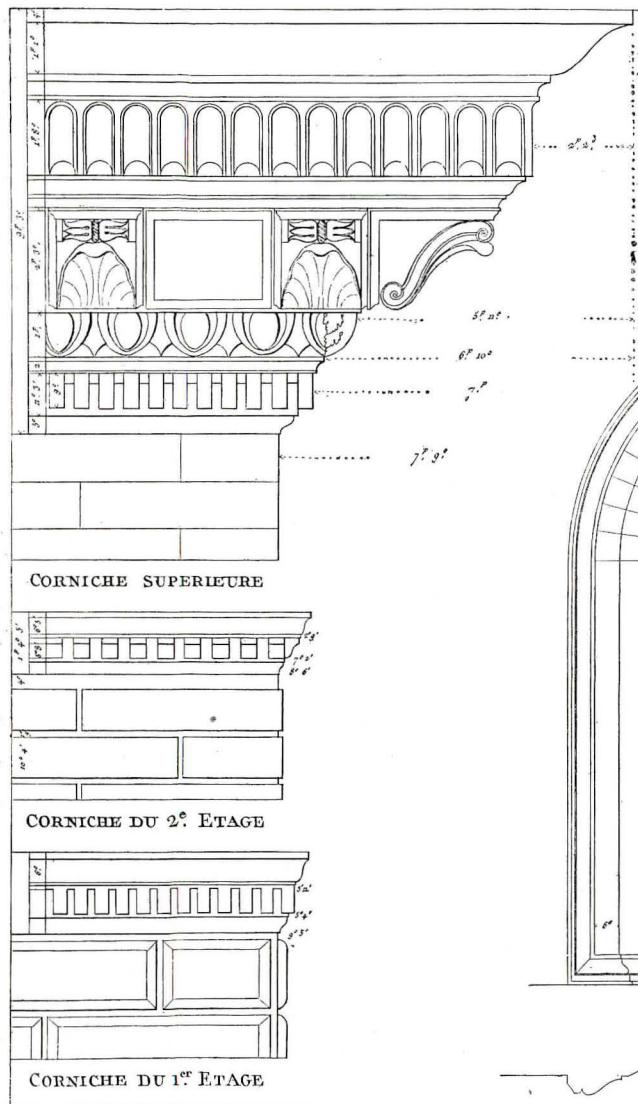
DÉTAILS DU PALAIS RICCARDI AUTREFOIS MÉDICIS
DANS LA VIA LARGA, A FLORENCE

6 Pieds
2 Mètres

PORTE DU PALAIS.

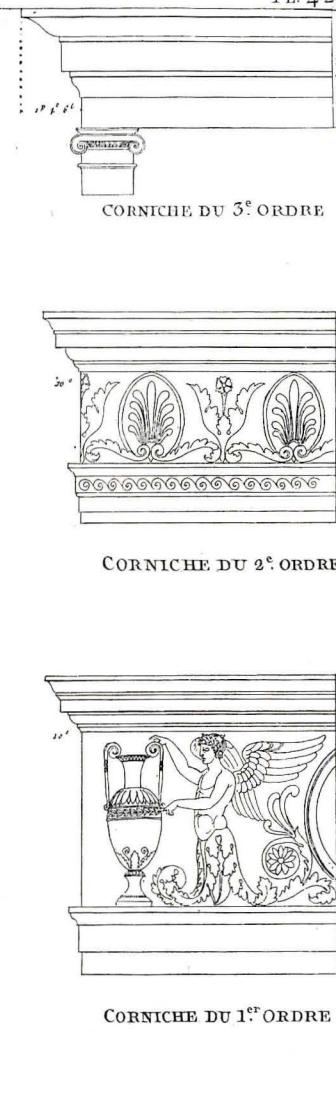


PROFIL EN GRAND DE LA MOITIÉ DE LA PORTE
AVEC LE DÉTAIL DE LA MENUISERIE.



Extérieur

DETAILS OF THE RICCARDI PALACE, FLORENCE, FROM "ARCHITECTURE TOSCANE"



Intérieur

The plate reproduced on the other side of this sheet shows details of the Riccardi Palace, which was designed by the Florentine architect, Michelozzo Michelozzi and was begun in 1430. The great beauty of this palace made it the favored place of residence of sovereigns visiting Florence. The main doorway, which is shown in this plate, is regarded as one of the most beautiful in Florence and is richly decorated with sculpture and bronze bosses. This plate is from the reprint of "Architecture Toscane" now being brought out by the publishers of this journal. This work by Grandjean De Montigny and A. Famin was first published in Paris in 1815.

PENCIL POINTS

VOL. IV, No. 8

PLATE XXXI



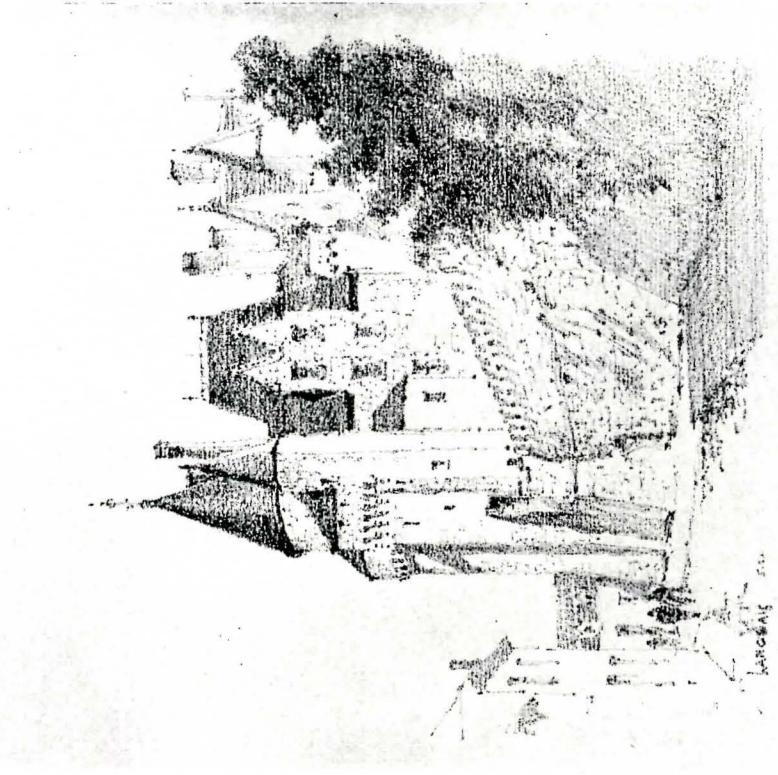
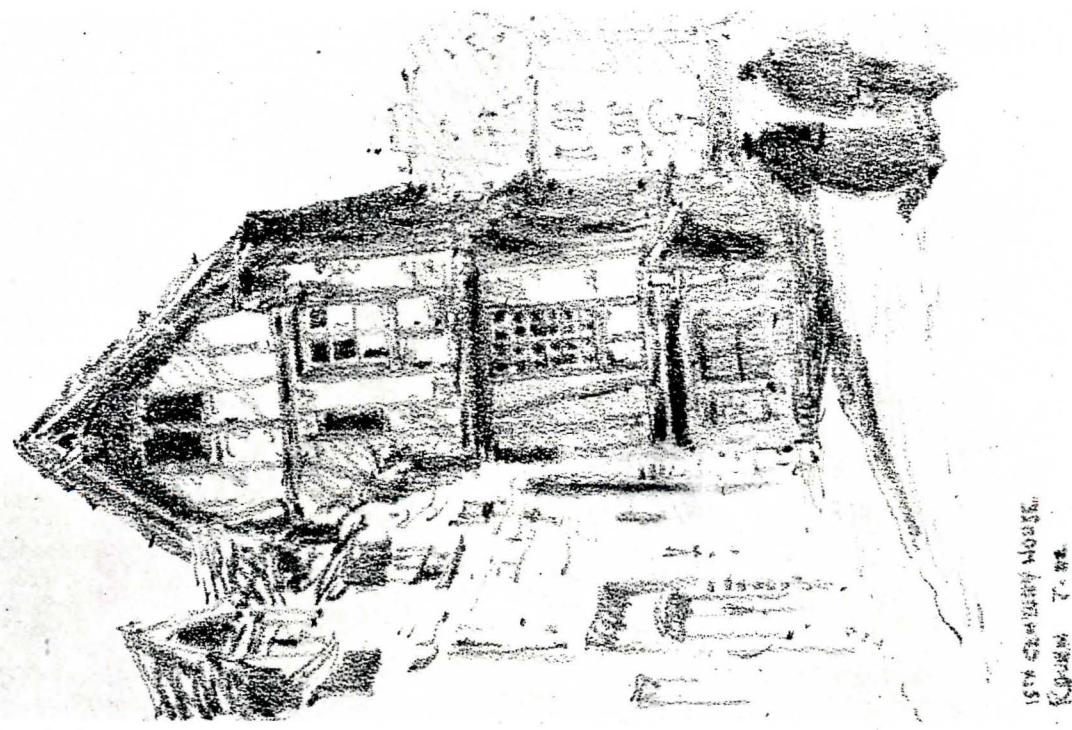
STUDY BY WILLIAM COTTON FOR CENTRAL FIGURE IN MURAL DECORATION
IN THE FOYER OF THE CAPITOL THEATRE, NEW YORK CITY

The figure study in pencil which is reproduced on the other side of this sheet is the drawing made by William Cotton for the central figure of his great mural decoration which extends across the grand foyer of the Capitol Theatre, New York City. It shows the artist's method of studying the composition and modelling of his figures, which are so important if a work is to have artistic worth.

PENCIL POINTS

VOL. IV, No. 8

PLATE XXXII



PENCIL SKETCHES BY ERNEST E. WEIHE

Two of the many pencil sketches made by Ernest E. Weihe during his recent stay abroad are reproduced on the other side of this sheet. These sketches, made with a comparatively soft, blunt pencil are characteristic of one type of Mr. Weihe's sketches. Other of his sketches show evidence of having been drawn with a comparatively hard, sharp pencil point, and these also are excellent. Many of Mr. Weihe's best drawings are in pencil with the addition of color, and cannot be represented successfully in monochrome. Mr. Weihe won the Paris Prize of the Society of Beaux-Arts Architects in 1919 and has just returned from his studies abroad.

THE MAKING OF WORKING DRAWINGS

PART IV, SHOP DRAWINGS ETC.

BY JOHN C. BREIBY

This is the fourth of a series of articles in which Mr. Breiby of the staff of Carrère & Hastings is giving much practical information on drafting room work. The first article covered the preparation of general drawings, the one-quarter or one-eighth inch scale drawings. The second article covered the making of three-quarter and other scale details. Full-size details were treated in the July issue, and at the conclusion Mr. Breiby will take up the preparation of sketches, etc., particularly sketches of interest to the drafting room.—ED.

THE idealist is always confronted by that which is of an absolute materialistic nature. The very means of expressing idealistic impressions are material mediums or forces produced by material means. The speaker or singer uses the material organism of the vocal cords to produce sound; the pianist obtains tones by means of a mechanical device; the painter has the canvas, brush and color with which to express thought. All of the impressions conveyed are the results of vibrations given off from material mediums to affect the hearing or sight. It may be said in passing, that properly related vibrations produce pleasing tones or colors, while vibrations lacking organization produce noise or unsightliness. It does not come within the borders of this article to consider the perfect relationship of vibrations to produce pleasing effects, or to consider the many theories regarding the nature of matter, or to explore any of the numerous and attractive bypaths for thought that are opened by the idea suggested above.

While what has been stated here does not in a sense bear directly upon the work of the architect, it is important indirectly, for the architect must express his ideal in material, and a realization of this fact gives a new appreciation of the importance of the shop drawings of the trades.

The fine arts and the sciences are parallel, the techniques differ, but reason is always the basis. The architect must solve his problems by much the same course of reasoning that the doctor uses in diagnosis, in determining the requirements of the client in the one case and the ills of the patient in the other case.

This may seem to be apart from the subject of this article upon the use of shop drawings, but when thought is given to the very source of material supply, its extraction from nature, its preparation and fabrication before the materials are made ready to be used in the construction of buildings, it becomes clear that the material side is so complex as to call for the co-operation of many men of many trades. Millions of workers are employed to further this end. Perhaps next to the obtaining of food stuffs for the sustenance of life, the erection of buildings, for the protection of life, is the most necessary. Caves and rude huts were made habitable, before personal garments were deemed necessary.

The architect, or master builder, has always since the beginning of civilization been the one to lead

the work of erecting shelter, and under his guidance the uses of tools and materials are directed towards this purpose.

Workers of material know their own particular branches of the work, what methods and tools to use for shaping the material for its proper function. In the last article, on the making of full-size details, attention was called to the fact that "these are the days of specialists." Little does the average person, who registers at a modern hotel, know or perhaps care to know, what thoughtful, intricate and careful preparation has been made for his personal comfort. The elevators run smoothly and quickly; desired temperature of water is obtainable; the pressing of a button will summon a servant; the meals are well prepared and well served, etc.

The architect does know and does care how all of these details are taken care of, for it has all been thought out and prepared according to his wishes and under his supervision.

The architect knows all the requirements necessary for a particular building which he has designed, and for which he has prepared working drawings. He cannot, however, be the expert for the many details relating to special trades which enter into the construction but belong to the province of men who have specialized in engineering or some trade. For instance, while he may be well trained regarding the strength of materials, he may not necessarily know how to obtain the maximum strength of structural steel at the minimum cost for the particular problem in hand.

To enable the architect to consider in every detail, the many parts and to solve the special technical problems, are summoned to his aid, experts in the many branches of building construction. This does not refer to the technical experts on his staff, nor others engaged as consulting engineers, as mentioned in part of one of these articles published in the May issue of *PENCIL POINTS*, as they are really a part of the architect's staff.

After the contract for the erection of a building has been awarded, subdivisions of the work must be taken care of—the steel work, stone work, ornamental iron work, mechanical work, and so on—all of which is executed either under subcontracts or direct contracts.

In order that they may carry on their work intelligently, all trades engaged upon important work prepare such drawings of their particular parts of

PENCIL POINTS

the work as may be needed to supplement the architect's drawings, all of which are governed by, and developed from, the architect's general and detailed drawings or layouts.

Before proceeding further, it must be said that as the architect is responsible to the owner for the proper execution of the work, he has, or should have, the power to approve or disapprove, upon showing good cause, the acceptance of any contractor or subcontractor who is to perform work.

Each particular contractor or subcontractor must prepare his work to form a part of the whole, and by methods and means of his own, therefore the shop drawings form a schedule of what is to be done and the order in which to do it. All shop drawings are submitted to the architect or his engaged assistants, for proper checking and co-ordination.

Every particular trade work must follow through certain channels in order that the work may be carried out properly. The contractor for the stone work must arrange that a particular piece of cut stone will be followed through and be set in its appointed place in the building. A block of stone from which many stones may be cut, must be placed on the saws with the best use of the material in view, therefore, on a stone shop drawing, the particular stones are marked and numbered, and such marks or numbers will be followed through, from the first block of stone selected, to the final position of setting at the building. The steel work will be carried through in the same manner, for the use of the proper shapes and sizes of members and so on, all trades requiring layouts for the execution of their work.

After the contractors and subcontractors receive all the necessary scale drawings, specifications and full-size details from the architect, they proceed with the preparation of shop drawings—first to know how to make proper use of their materials, and secondly, to show exactly to the architect, how they propose to execute the work with machinery and materials at their command. The shop drawings are really the final word in showing what will be done. It may be well to say, that for work like the ordinary excavating, brickwork, ordinary partitions, plastering, in short anything the execution of which can be described in the specifications, shop drawings are not necessary, and for small operations such as the construction of a frame building where no special features of work are required, and the architectural details are sufficient to tell the mill man, generally, how a moulding should be built up, no shop drawings are required; but even then, the mill man will make rough layouts for his own use, showing methods of building up work, etc.

Remember the contractor cannot proceed with the work until his shop drawings have all been approved by the architect—they are his instruments of actual fabrication.

If one could but see at one glance, the complete operation of obtaining all the necessary materials and the preparation thereof from the various sources of supply and fabrication plants, one could fully realize how necessary it is that all required information and drawings are issued to the contractors as

early as possible after the contract has been let, in order that they may prepare shop drawings for the architect's approval, and proceed with the work on schedule. Many operations have to be gone through by each trade, before their material can be made ready for use.

The architect with his assistants will check all shop layouts or setting drawings submitted by the contractors, and generally this involves (before the drawings are finally approved) corrections, disapprovals, etc., rechecking, etc.

Do not neglect to check contractors' submission drawings as rapidly and intelligently as possible. It is impossible to lay down any rules for this work. It is from the shop drawings that the architect can best co-ordinate the work—for instance, the marble man cannot proceed with his work before his shop drawings have been checked with the steel work which is to carry the marble, or the distance between the walls and openings determined; the steel columns cannot be set, unless provision has been made for the proper footings; the elevators cannot be installed unless the structural steel of the elevator hatch has been located and the shop drawings submitted for the elevators has been checked for clearances, etc.

Many times it is necessary—before the contractor can prepare shop drawings and proceed with a particular portion of work—that the work into which it is to be placed must first be erected, in order that measurements may be made at the building, to obtain required results. As an example, in a paneled wood-finished room, the surrounding rough walls should be in place, before any intelligent, accurate division of the wood panels can be determined, and measurements should be made of constructed work before the woodwork is scheduled or built. All this, the architect must determine and govern.

Check all drawings for clearances, dimensions in general, construction, etc.; check with the specifications to ascertain that they have been lived up to; check with the architectural working drawings. While the architect should check dimensions for his own satisfaction, he cannot be responsible therefore to the builders, for they must produce the materials according to their own methods and are responsible to the architect for the correctness of their work.

Where one trade comes in connection with another, it is most important to see that the meeting points have been properly solved. Do not let one trade wait upon others for the completion of work due to any neglect of not checking drawings, or in expediting the work. It is only fair to say, that most workmen like to find a way out of delays, by blaming "the other fellow," and "the other fellow" may at times, be the architect.

The shop drawings illustrated by Figures 1 to 7 were not selected for any particular types or standard methods, but they will perhaps give some idea of a little part of the actual construction work which enters into buildings, and show how the several technical experts have solved their particular problems in assisting the architect to produce the required results. It is well for the young architect to remember that he works with the men of trades,

PENCIL POINTS

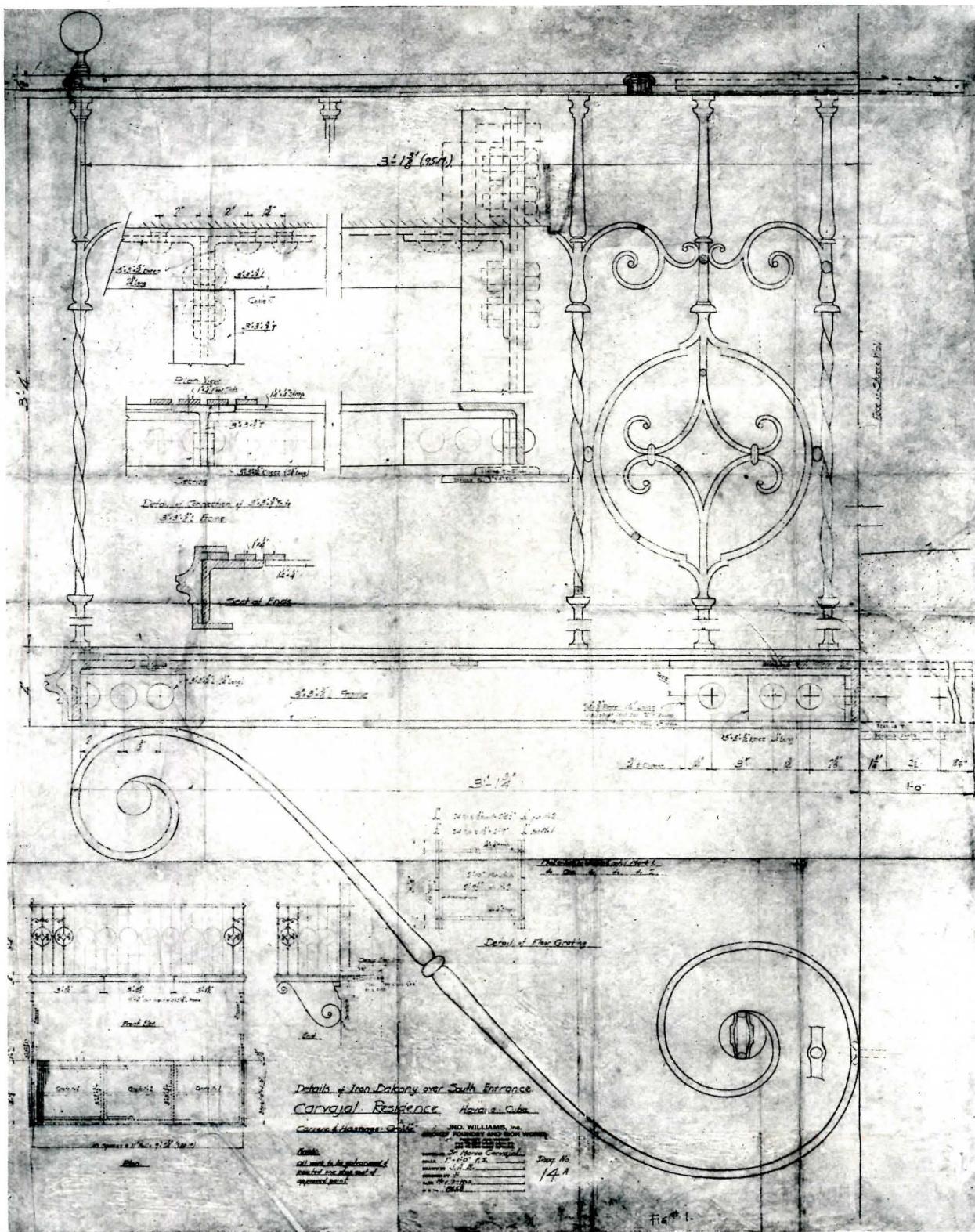


Figure 1. Details of Iron Balcony over South Entrance. Residence for Sr. Marco Carvajal, Havana, Cuba. Carrère & Hastings, Architects.

PENCIL POINTS

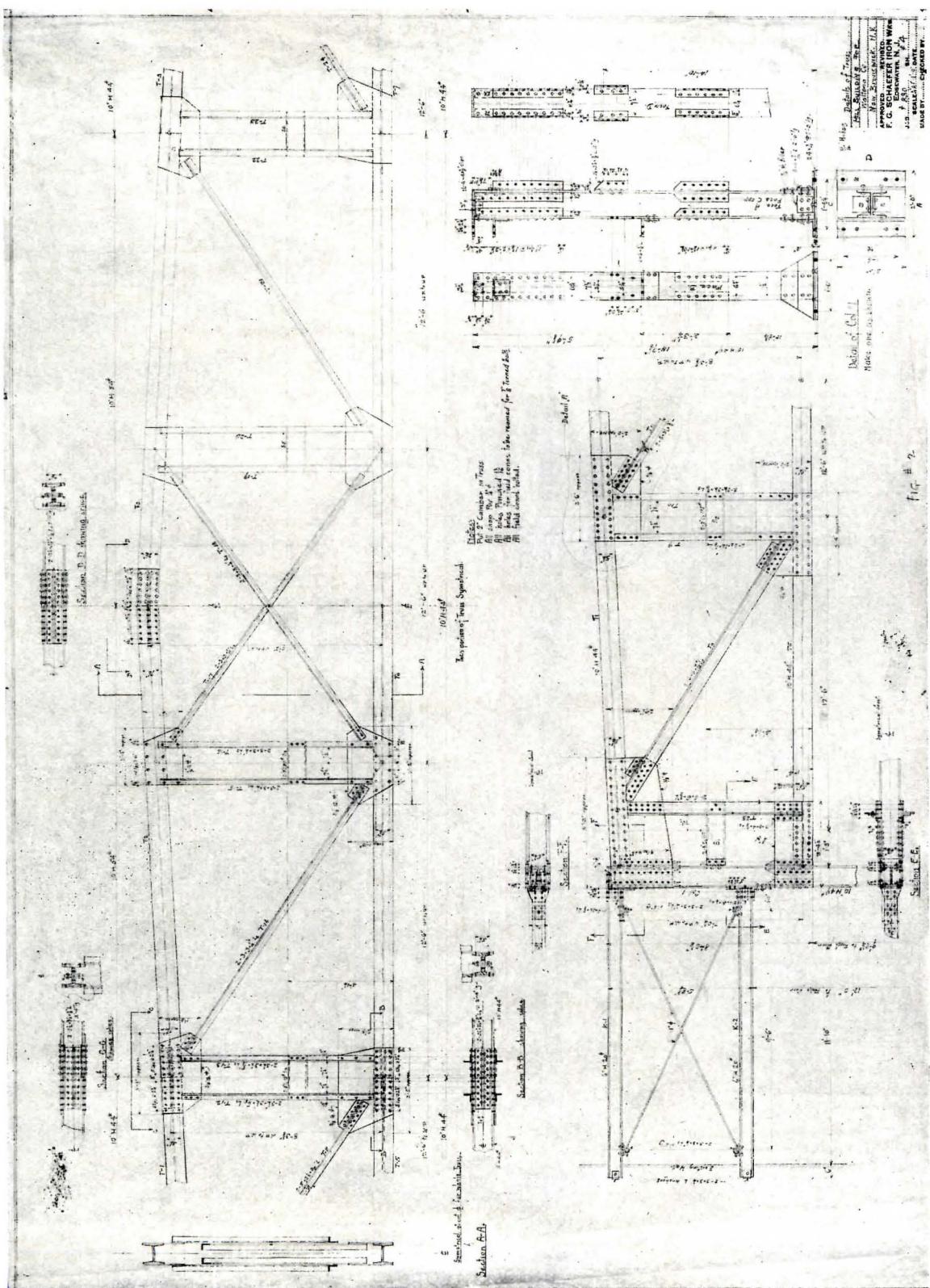


Figure 2. Details of Truss. Mill Building for Waltons Co., New Brunswick, N. Y.

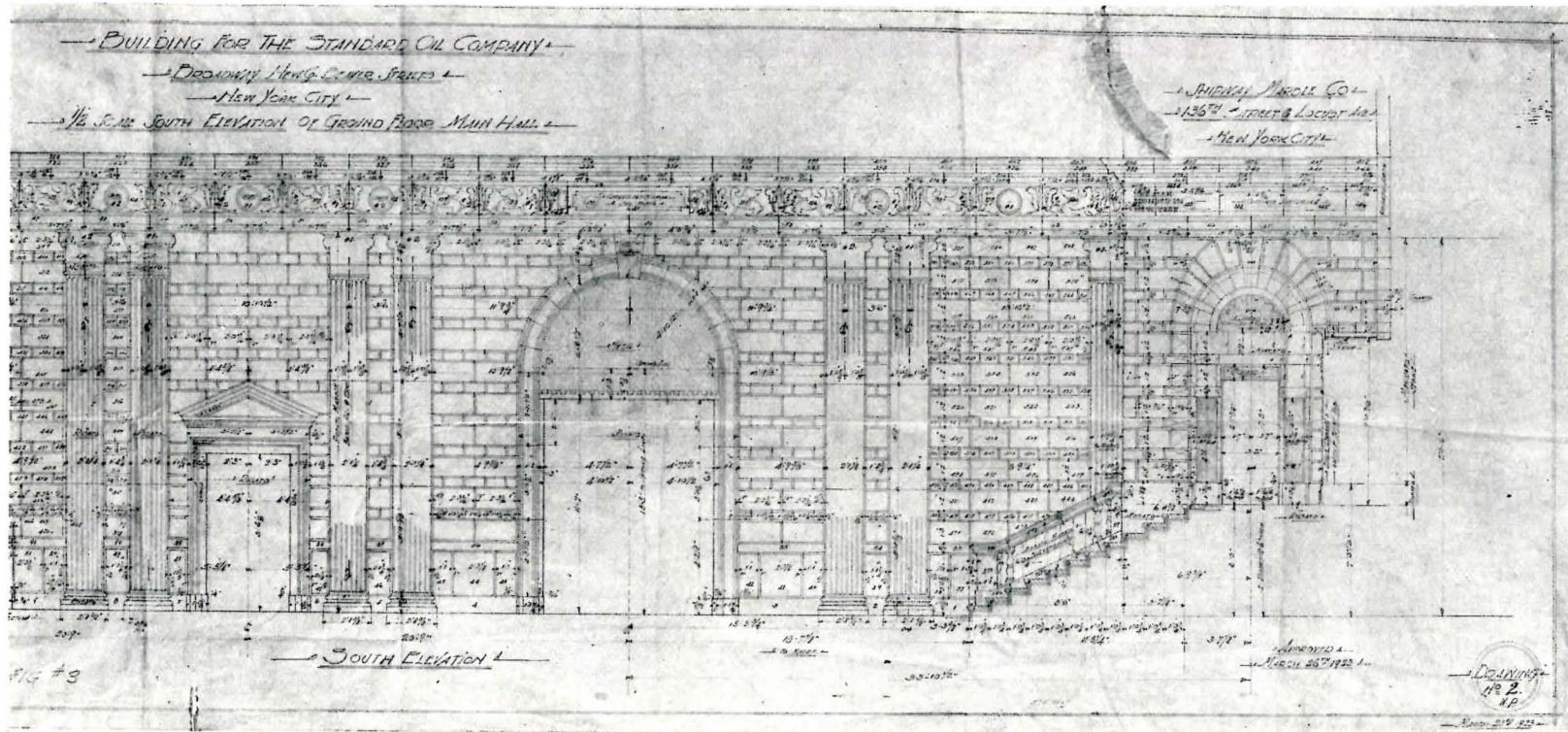


Figure 3. South Elevation, Ground Floor, Main Hall. Building for The Standard Oil Company, New York City. Carrère & Hastings, Architects. Shreve, Lamb & Blake, Associated.

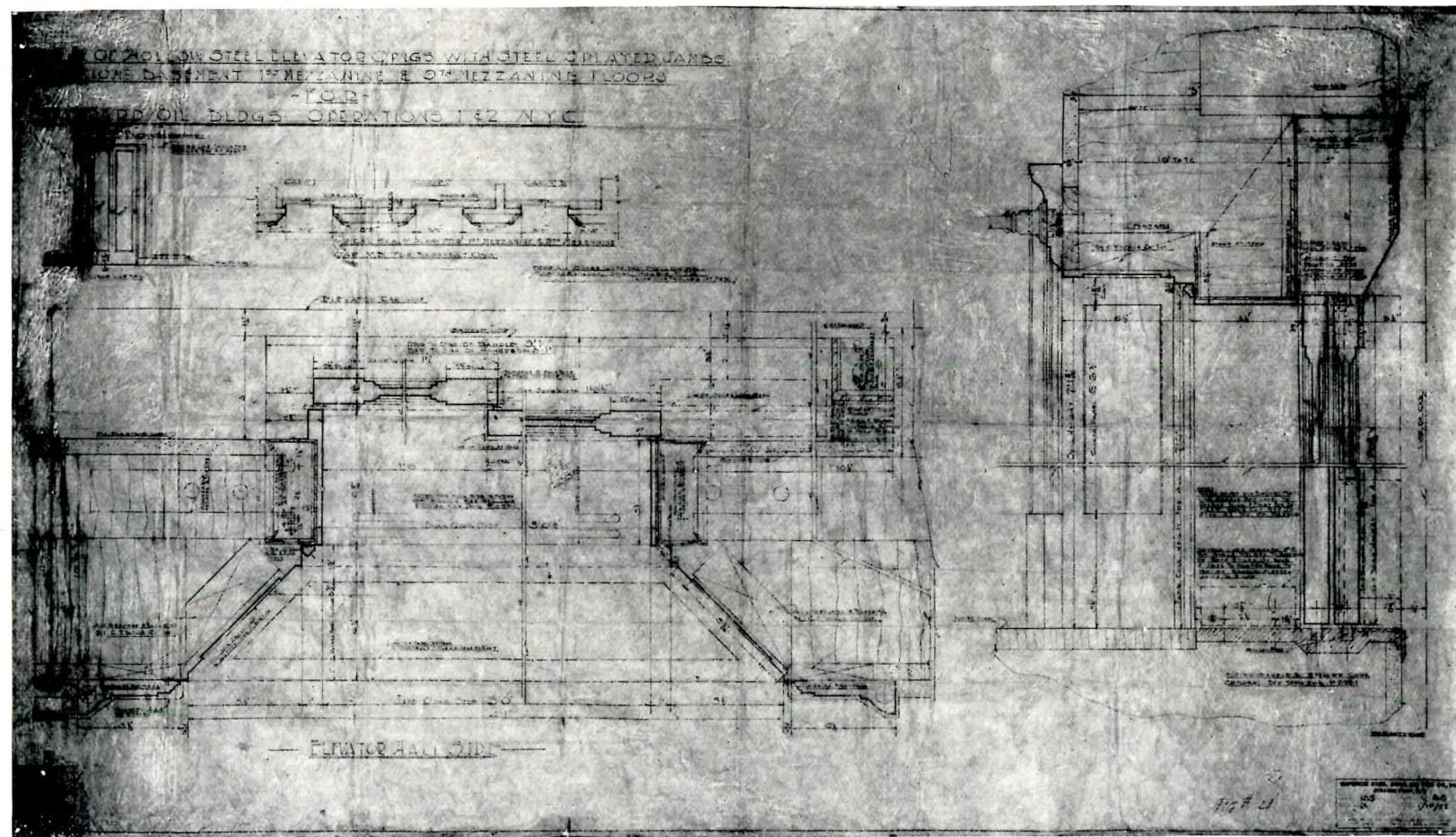


Figure 4. Detail of Hollow Steel Elevator Enclosure with Steel Splayed Jambs. Carrère & Hastings, Architects. Shreve, Lamb & Blake, Associated.

PENCIL POINTS

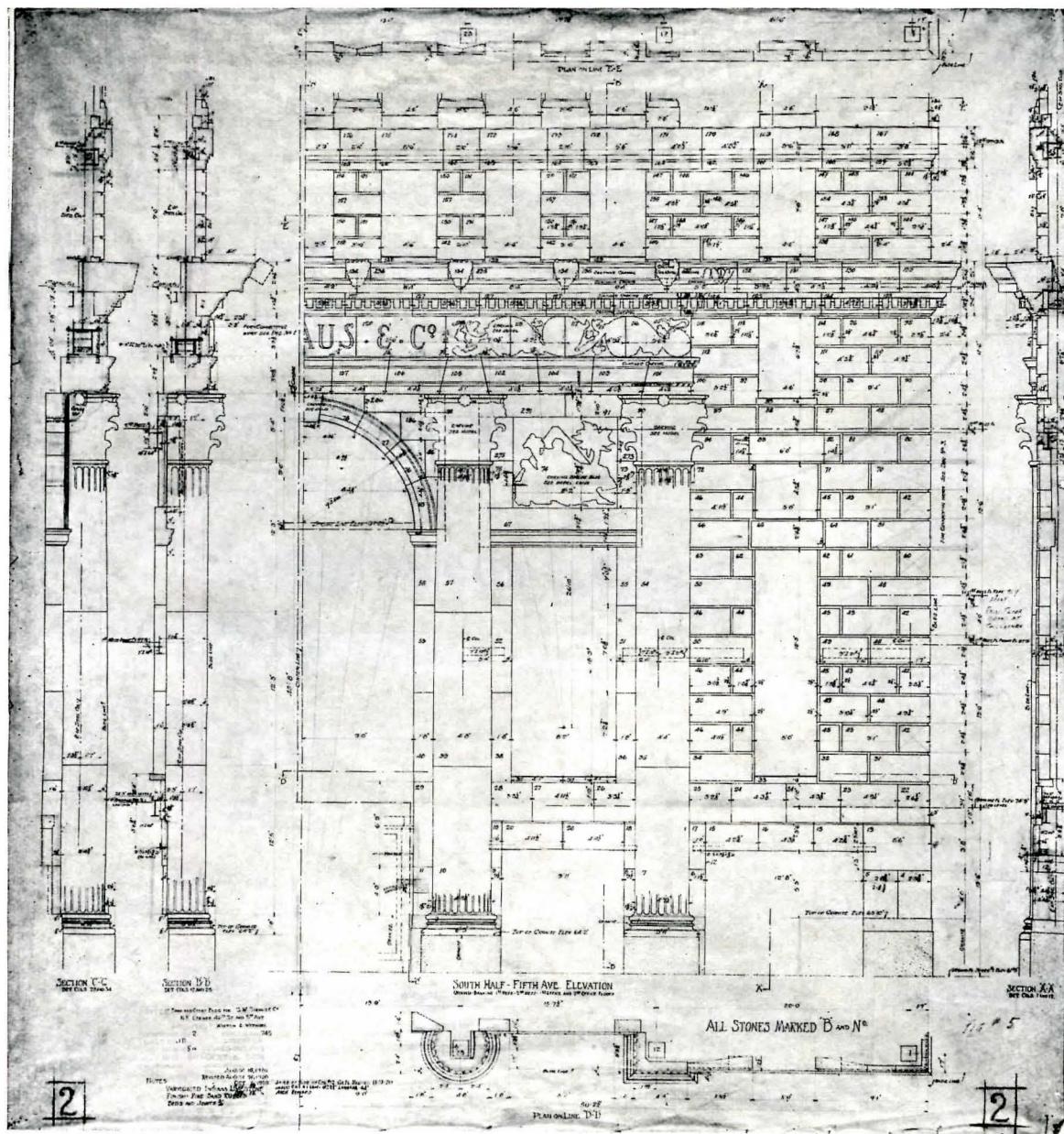


Figure 5. Fifth Avenue Elevation, South Half. Bank and Office Building for S. W. Straus & Co. Warren & Wetmore, Architects.

PENCIL POINTS

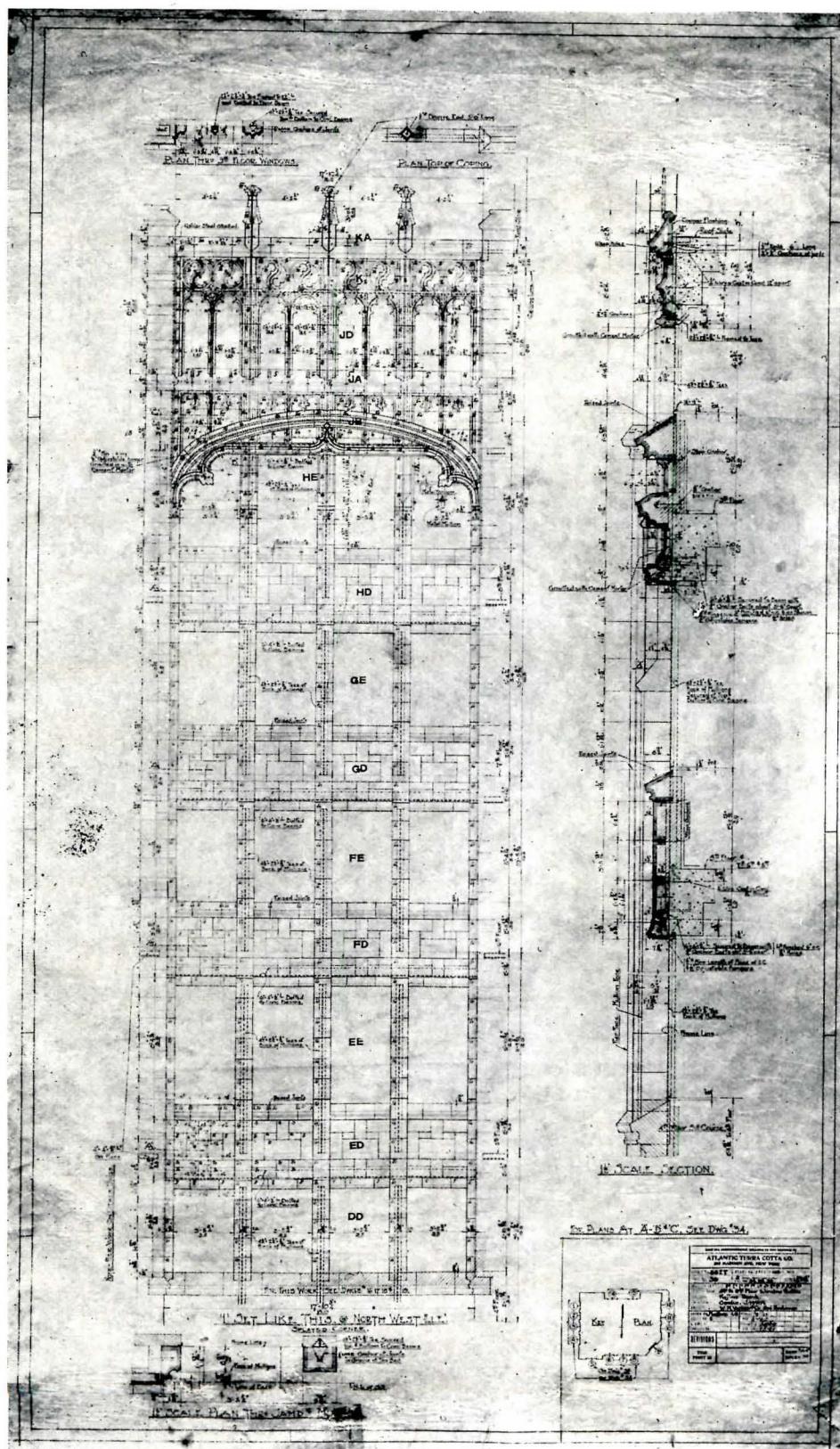


Figure 6. Shop Drawing of Part of a Terra Cotta Façade of a Banking Building in Japan. W. M. Vorices & Co., Omi Hachiman, Architects.

PENCIL POINTS

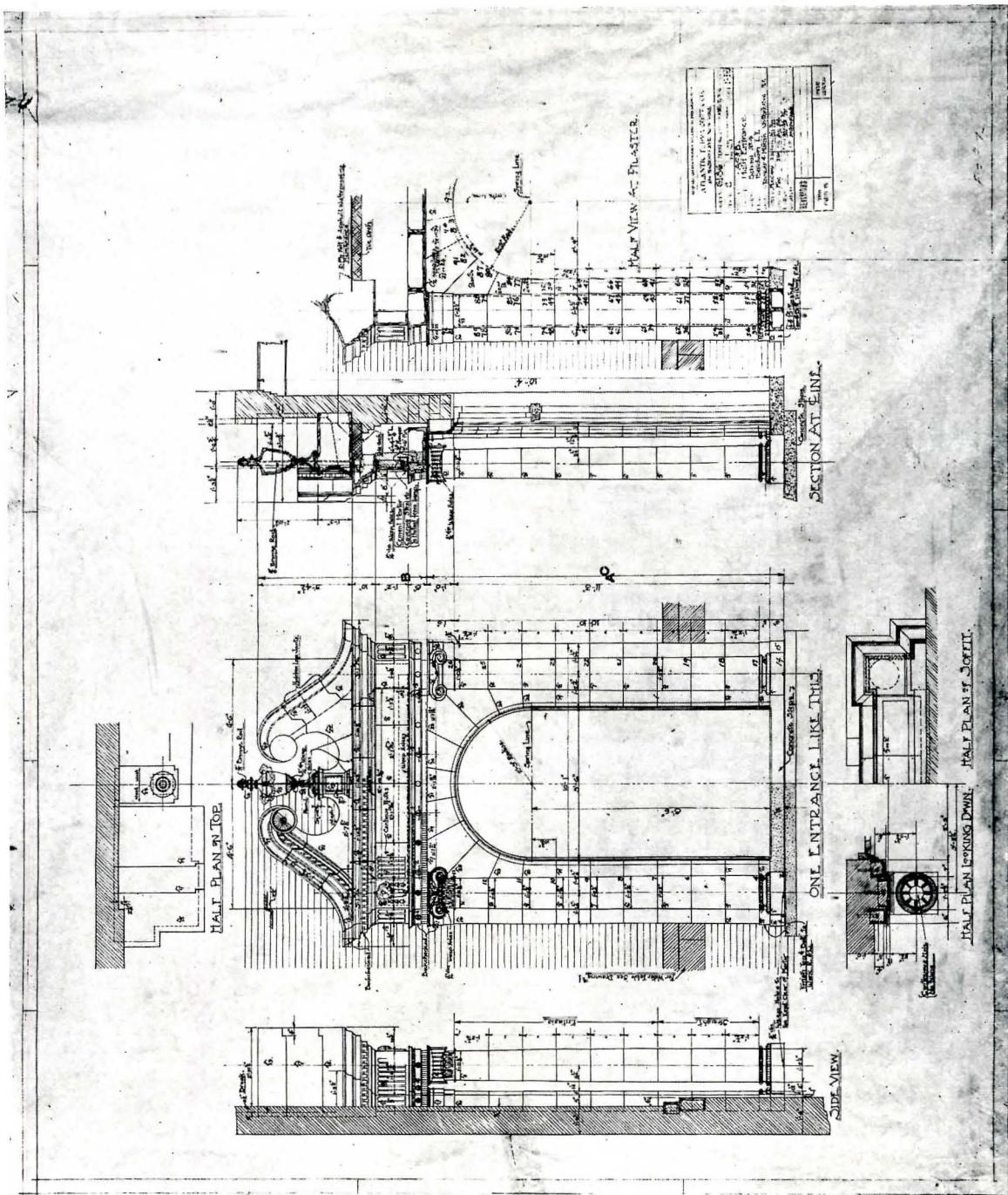


Figure 7. Terra Cotta Shop Drawing of an Entrance Door Feature of a School Building.
Tooker & Marsh, Architects.

PENCIL POINTS

and while in a position to oversee and guide, is not set over them, for they are as necessary to him as he is to them.

Before beginning the description of the drawings, some mention may be made regarding the preparation of architectural models, and their relation to the success of the design. Architectural models of ornamental work, are prepared from the architect's details. The modeler is the artist engaged by the architect, and is therefore rightly to be called a part of his staff. It is by means of models that the wood and stone carver, the worker of ornamental plaster, iron work, etc., can obtain in three dimensions, that which the architect cannot show on drawings. The architect will confer with the modeler, as to the character of the ornament which he has conceived. After the models have been approved by the architect, plaster casts are made and sent to the job or shops, as actual instructions as to what is desired for ornamental effect—such models are then a part of working drawing development.

A word or two may also be said regarding the making of full-size details for some particular trades. Full-size details for terra cotta and cast metal work should be made for shrinkage allowances. Such information can readily be obtained from the various manufacturers of the material.

Figure 1 shows a scale and full-size shop drawing for the construction of an iron balcony. All of the structural parts are clearly shown—method of anchoring into the wall, method of building up of the metal mouldings. Refer to Figure 3 of the June issue of PENCIL POINTS, Part II being the subject on the preparation of scale details. Drawing illustrated as Figure 1 is the actual shop erection drawing of the balcony over the main entrance door. The architect in addition to the scale drawings, prepared a full-size detail showing profiles, etc., but it would have been a waste of time to attempt to show actual construction. The shop well knew how to obtain the desired effect, using their standard method of construction and with their particular set up of machinery.

Figure 2 shows a scale detail of a truss and supporting columns for a mill building. The truss is 88'-0" long, 9'-2" high at the center, and 7'-0 3/4" high at the ends, connected to Bethlehem columns and supports twelve 45'-0" trusses, set in cradle struts.

The difficulties to be met in the fabrication and erection, required the trusses to be assembled complete on the shop floor. All the field holes were sub-punched $\frac{1}{8}$ " and subsequently reamed for $\frac{7}{8}$ " turned bolts. To properly distribute stresses, a 2" camber was put in the bottom chord. The gusset plates were shop riveted to the top and bottom chords. The columns, in order to withstand excessive bending, were detailed for concentric connections in as far as was possible. For all work of this character the structural engineers take care of the proper design of truss, etc., as to full development of each member as to stresses set up by the applied loading. This particular detail is a development of the combination of a stress diagram and erection drawing, drawn at $\frac{1}{8}$ scale, which showed merely the skeleton of

the work required. In checking a drawing as described, clearances must be taken into consideration and in this case, this had to be checked for machinery layout. Also the work must be checked for the clearances of connecting members. Perhaps this detail is too complicated to be checked by the average architectural draftsman and such work should be left to the structural engineer, who originally designed the work. This drawing was selected, however, to show exactly what work comes under the head of a shop layout. It would also be interesting to tell about the transportation and erection in the field but this work really comes under the contractor's forces.

The success of estimating upon work of this nature depends a great deal upon the facilities for handling the work at the shop and the materials available. Substitution of material other than that shown on engineer's layouts is at times allowed, but the substitution must be of materials of the required strength in the direction of the maximum stresses called for on the architect's or his engineer's drawings. Oftentimes it is found that a member of greater dimension is more economical to use, owing to the greater allowable fibre stress.

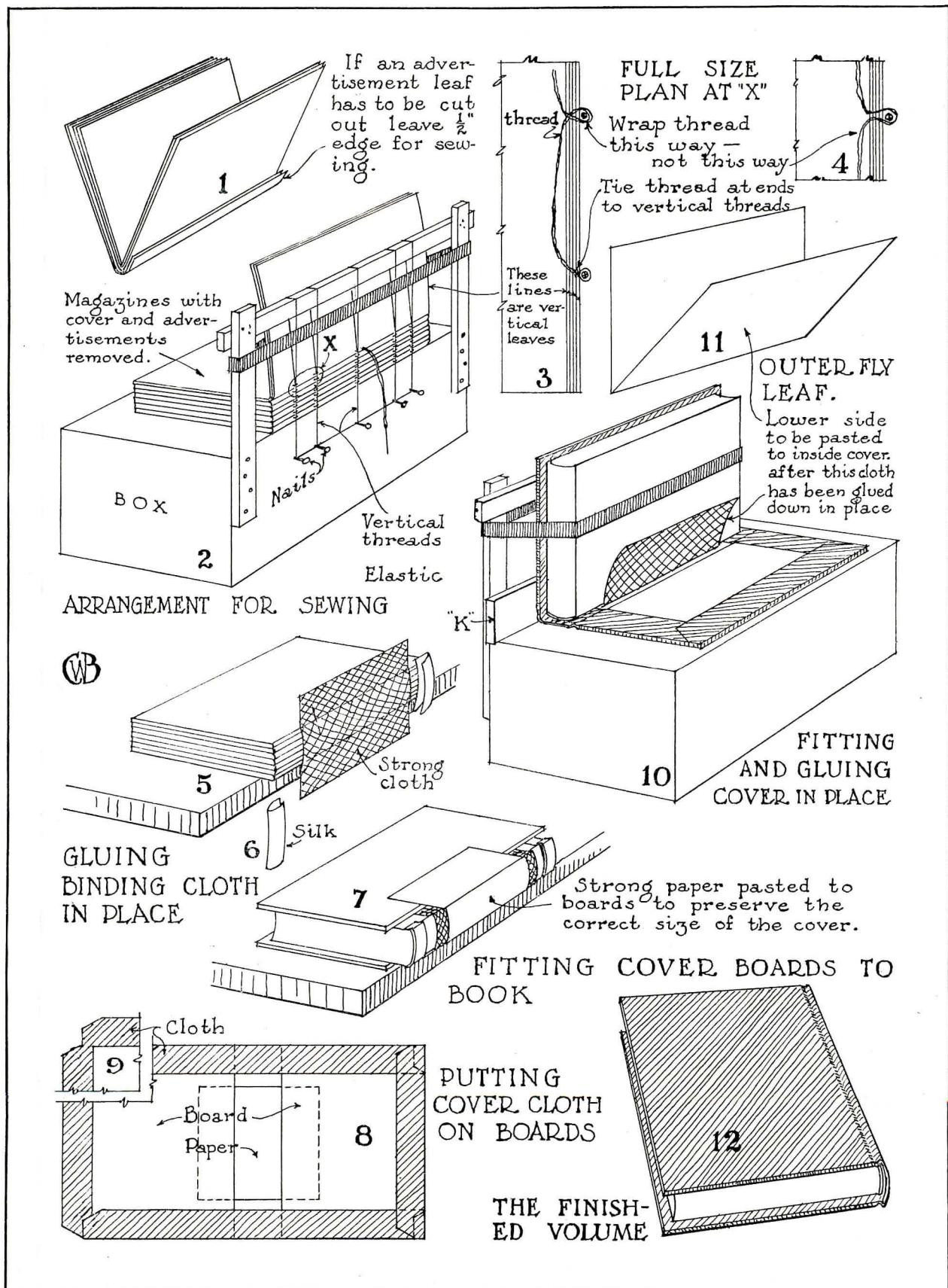
Figure 3 shows a marble and stone setting drawing for the wall treatment of an entrance hall. This particular shop drawing was prepared at the architect's office, by the subcontractor's expert, to facilitate the work. Note how clearly each stone is figured and lettered for its position in the executed work. The architect checked this drawing, during the progress in preparation, allowing for clearances, size of stones, location of joints, etc. The work is now in process of fabrication at the stone shop or yard, and from the first saw cut of the various stones to the final finish, cuts, listing, transportation and setting in place at the building, the stones and pieces are all identified by their numbers and positions determined on this drawing.

Figure 4 shows a shop layout of an elevator door front, metal bucks, doors, guide rails, overhead construction, grounds and anchors. Most careful attention must be given in checking work of this character; clearances between the elevator car and door saddles; how the work will fit in with the enclosing walls; to see that the doors are of proper width and have proper slide. The checking of work of this nature requires considerable knowledge of the mechanical functions involved. The elevator front must co-ordinate with openings on all the floors, fastening to the steel construction, design of doors, etc.

Figure 5 shows a stone setting drawing, necessary for the erection of a large banking house. Observe how the stones have to be checked out to allow for the structural steel, anchors of stones provided, bedding and bearing of the various stones, stones requiring special models for ornament. Each set of typical stones is clearly lettered and special stones individually picked out. This drawing shows an excellent example of how a steel structure is clothed with stone work. It will be seen what careful checking is necessary in order to have all the stone

(Continued on page 63)

PENCIL POINTS



Diagrams Showing How to Bind Magazines at Home. See Text Beginning on Page 50.

HOW TO BIND YOUR PENCIL POINTS

BY C. W. BRANSON

WITH very little trouble or expense you can convert your PENCIL POINTS into attractive and substantial bound volumes. There are probably a great many readers of this journal who fail to get the maximum amount of good from their back numbers of their magazines because of the inconvenience of finding just what they want whenever they wish to refer to a plate or an article. There is not always time enough, especially in the drafting room, to look through several loose copies one after another until the desired information is found. Hence it often happens that the back issues of the magazines are piled up in a more or less neat pile and their contents forgotten.

Placing the separate copies in a binder will help to some degree; but temporary binders are somewhat clumsy and, the edges of the magazines being uneven, each copy must be taken separately and leafed through instead of spinning the leaves as is possible with the trimmed edges of a bound volume. For this reason the binder, while it preserves and keeps in order the various copies, does not satisfactorily solve the problem of convenient and speedy reference. The best and most effective way of keeping PENCIL POINTS always ready for handy reference is to bind the volumes in regular book form.

It is not so difficult or tedious to bind a book as many suppose and nothing but the simplest, home made apparatus is required. Nor does it take a great deal of time. It can be done easily in three or four evenings at home without hurrying—and it is best not to hurry too much on your first attempt. Twelve copies make a nice sized volume, though, if the advertisement sheets are removed, twenty-four copies will not make too large a book. The covers should all be removed and, if desired, the sheets containing advertisements only on all four pages may also be removed. Care should be taken that some of the text matter is not included in some of the advertisement pages cut out. If a sheet contains one advertisement leaf and one text leaf the advertisement leaf may be cut out leaving a half-inch margin for sewing the other half in place, as shown on the accompanying sketch (Figure 1).

Next arrange a box about 12 in. x 12 in. x 15 in. or larger, upside down, with two upright sticks supporting a cross stick as shown in Figure 2. Five nails are then driven into the side of the box in a row about nine inches long, with the two outside nails at each end about $1\frac{3}{4}$ in. apart, making the center nail about $2\frac{3}{4}$ in. from either adjacent nail. The heads are left projecting a half inch or more. Next several (about 4 or 6) strands of heavy white linen thread are tightly stretched vertically between each nail and the

horizontal stick above. Now thread a stout needle (a small darning needle does nicely) with a thread about four feet long, doubled. Tie the ends to one of the end vertical strands and you are ready to sew.

First you sew on the fly leaves. A sheet of white paper (cold pressed drawing paper is excellent) the size of the magazine when folded once gives you the size of two fly leaves. Lay the folded edge against the vertical threads on the box, care being taken that the end threads are about the same distance from their respective ends of the fly leaves. It is well to lay a couple of sheets, removed from the advertising section, under the fly leaf for protection. These should not be sewn, but will temporarily be held in place by the glue when the back edge is glued. They should, of course, be removed before putting on the cover. The top fly leaf may be held up against the vertical threads, out of the way, by a piece of elastic—a yard of garter elastic from the ten cent store serves the purpose—stretched over the two vertical sticks as shown in Figure 2. Now with your needle draw the thread through the paper right at the crease of the fold and up opposite the next vertical threads, draw it back again, turn it around the vertical threads as shown in Figure 3 (avoiding the method shown in Figure 4) then back through the paper again and on to the next vertical threads in the same manner. The thread that has been sewn should not be left loose but should be kept tight as you go along. On coming to the end vertical threads sew through as before, draw thread up tight and tie a knot around the vertical threads to hold the thread tight. This is easily done with the needle. The fly leaves are not sewn in place. Remove the elastic and allow the vertical leaf to lie down flat on the box.

This done the *last* number of the magazine is laid down on the fly leaves, face up, with the back edge against the vertical threads as in the case of the fly leaves. Open the magazine in the center and hold the top bunch of leaves up against the vertical threads with the elastic, as was done with the upper fly leaf. Now, without untying the knot around the vertical threads where you finished sewing the fly leaves, sew through the magazine sheets exactly as was done with the one fly leaf sheet—wrapping around each set of vertical threads as before until the opposite end is reached. Here tie the thread as before to the end vertical threads and, with the next number of the magazine in order, continue sewing until all the numbers are sewn in place. When renewing the thread in your needle always tie the new thread to the old. A good way to do this is to draw the old thread up tight and tie

PENCIL POINTS

the knot at and around the nearest set of vertical threads. The upper sheet of fly leaves is sewn on last of all, in the same manner, the thread tied securely to the end set of vertical threads, when the sewing is completed. Place some advertisement sheets over this for protection but do not sew them in place. Then put a weight on top of this to hold the magazines firm and brush a good coat of glue over the back clear out to the edges on all sides. Next carefully cut the vertical strands of threads leaving each end about 2 in. or $2\frac{1}{2}$ in. long and fold these ends back into the glue and brush glue well over them. Now press a piece of stout denim or other strong cloth about 7 in. by 9 in. against the glue as shown at Figure 5. This cloth should be well secured to the backs of the sewn magazines as it is used to hold the back on the volume (to avoid confusion we will call it the "binding cloth"). Next a small piece of colored silk or other attractive looking cloth is folded as shown in Figure 6, glued together, and placed with the folded edge projecting not more than $1/16$ in. beyond the edge of the volume and glued in place. This piece of cloth will show at the top and bottom edges of the finished volume. Now leave in this position until the glue is thoroughly dry—over night at least.

When the glue is dry the volume should be taken to a paper dealer, or some establishment where they have a paper cutter, in order that you may have the edges trimmed smooth. While there get some bookbinder's board and bookcover cloth. The board should be hard and stiff and the cover cloth should be heavy enough to be durable, as the volume will receive more or less hard usage in the drafting room.

The board should be cut to a size that will project $\frac{1}{8}$ in. at top, front and bottom of the volume but be $\frac{1}{4}$ in. or $\frac{3}{8}$ in. from the back. Figure 7 shows how to fit the boards to the volume. A strip of strong wrapping paper is pasted to the boards but not to the book.

When the paste is dry the boards are removed and laid on the inner side of the cloth and a pencil line is drawn around the edges. Remove the boards and cut and notch the cloth as shown in Figure 8 at detail 9. Now brush a coat of thin glue on the back of the boards, including the paper, and all over the inner side of the cloth. Replace the boards on the cloth where the pencil lines indicate, turn the cloth and boards over and press out any wrinkles and then fold the edges of the cloth over on the inside of the boards as shown in Figure 8. Wipe off any surplus glue that is beyond the edges of the cloth on the boards.

You are now ready to fasten the cover on the book. First, remove the extra sheets that were put on the outside when sewing to protect the volume and which have been held in place with glue only. Then fit the back on the book carefully, seeing that it is straight and that the projection of the edges is the same all around. Now set the book on the box used for sewing as shown

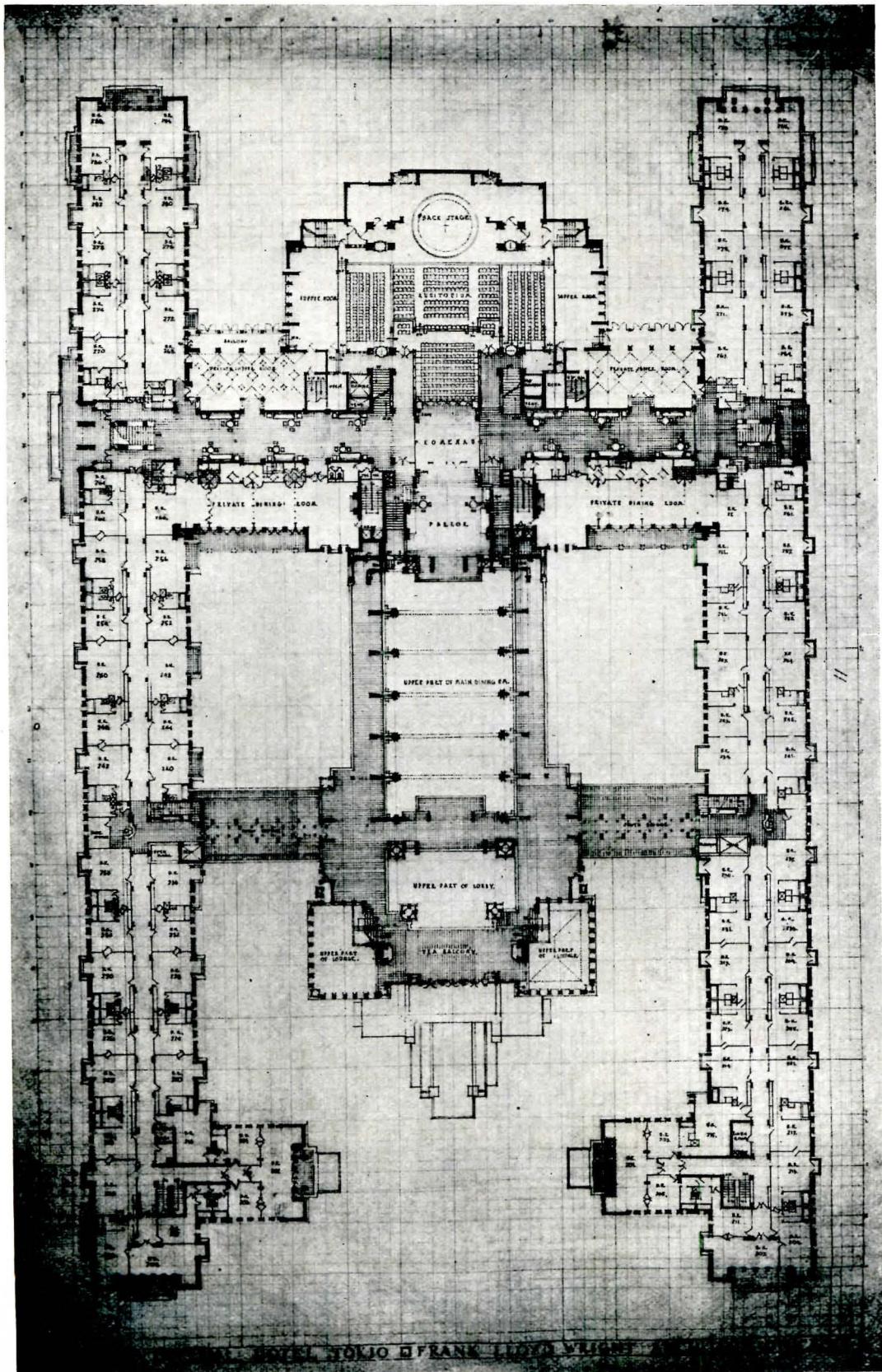
in Figure 10, place a small board as shown at "K," lay one cover down flat and stretch the elastic across to hold the rest of the volume firm. Then brush a good coat of glue that has not been thinned on the board under the binding cloth. Brush it well back into the corner, but not under the edge of the volume. Then lay the binding cloth down on this, smooth it out and see that all parts of it stick. When this is done have the outside fly leaf sheet ready (a sheet of stout brown wrapping paper is suitable, or drawing paper may be used) folded as the other fly leaves were and trimmed to the size of the trimmed magazines—see Figure 11. Brush a coat of thin glue all over the surface of the cover which is lying flat on the box and bring the glue up on the original white fly leaf for about $\frac{1}{8}$ in. along the bottom edge. Now carefully fit the cover fly leaf in place against the vertical book, have the folded edge well back in the corner made by the book and the cover, and then lay the outer leaf down into the glue and smooth out. This should be on straight, leaving an even cloth margin on each edge of the inside cover. Wipe off all surplus glue with a clean, damp rag, remove the elastic band and shut up the cover. Turn the book around and lay the other half down on the box and proceed exactly as was done for the first side.

This finishes the binding. Remove the book carefully and lay it down flat. See that the back of the book fits snugly up against the back of the cover and weight it down and leave it to dry. If twenty-four copies were used and several advertisement sheets cut out the back may be slightly thicker than the rest so, when putting a weight on it, let the edge project slightly beyond the table as shown in Figure 7. The book should be left this way for a day to allow the glue to dry thoroughly. Then remove the weight, lay on a table, open the front cover carefully and press out flat. Turn a few pages and press this out flat and continue in this manner to the back of the book. This will prevent "breaking" the back at any one place, will allow it to lie open flat anywhere and will help it to hold its shape.

A cover design more or less elaborate may be drawn out on the front cover with a white pencil and then traced in black, waterproof drawing ink which will add greatly to the appearance of the volume. It should contain the name of the magazine, of course, and the year date or dates of the volume. The owner's name is not inappropriate on the cover, if not too conspicuous.

The author has bound several books in this manner, including the 1921 and 1922 copies of PENCIL POINTS in one volume, and has always found the results very satisfactory. Aside from the practical advantages of having the magazines bound in this way there is a certain satisfaction in possessing volumes that you yourself have bound—and there is a great deal of pleasure to be obtained from the occupation of binding the volumes.

PENCIL POINTS



Main Floor Plan. Imperial Hotel, Tokyo.

Frank Lloyd Wright, Architect.

HOTEL ARCHITECTURE FROM A HOTEL MAN'S VIEWPOINT PART III

BY ROY CARRUTHERS

This is the third installment of a serial article which Mr. Carruthers, who is Managing Director of the Waldorf-Astoria Hotel, is telling what are the practical requirements in hotel design from the hotel man's standpoint. Mr. Carruthers will discuss design character, planning and equipment.—Ed.

RESORT hotels present a problem in planning that is different in many ways from the problem of planning a commercial hotel or a hotel intended largely or entirely for permanent guests.

People require the atmosphere of a home in a resort hotel for usually their stay is of considerable duration and they like to go back to the same resort and the same hotel year after year. Everything must be done to make the resort hotel home-like. Also the resort hotel may be regarded as a large club for these hotels have in conjunction with them such features as golf links, tennis courts, rooms for dancing, etc. In many of these hotels there is an assistant manager or a hostess whose duty it is to arrange for and preside over the social events so necessary to make the stay of the guests at the hotel pleasant. The home and club features are characteristic of all successful resort hotels, though these houses vary from those of relatively small size to the enormous hotels such as the Royal Poinciana at Palm Beach, which accommodates fifteen hundred or more guests. One of the most talked of hotels of this type is small, El Mirasol at Santa Barbara, the nucleus of which is the old Herter residence which was turned into lounges, parlors, etc., while in the grounds around the house

were built three and four room cottages in the bungalow style arranged about a plaza. It is one of the most artistic as well as one of the most delightful of places. The Everglades Club at Palm Beach is also comparatively small and is most unusual and exclusive. In architecture and furnishing it is distinctive. It has a private golf course and other club features which are among its chief attractions. Another comparatively small hotel that has become successful through its special features is the Samarkand at Santa Barbara, California. The idea expressed in the Samarkand is to combine the features of a stay in a private home with the advantages of residence in a hotel and the added attraction of an exotic atmosphere supplied by a dignified architectural treatment of Persian inspiration.

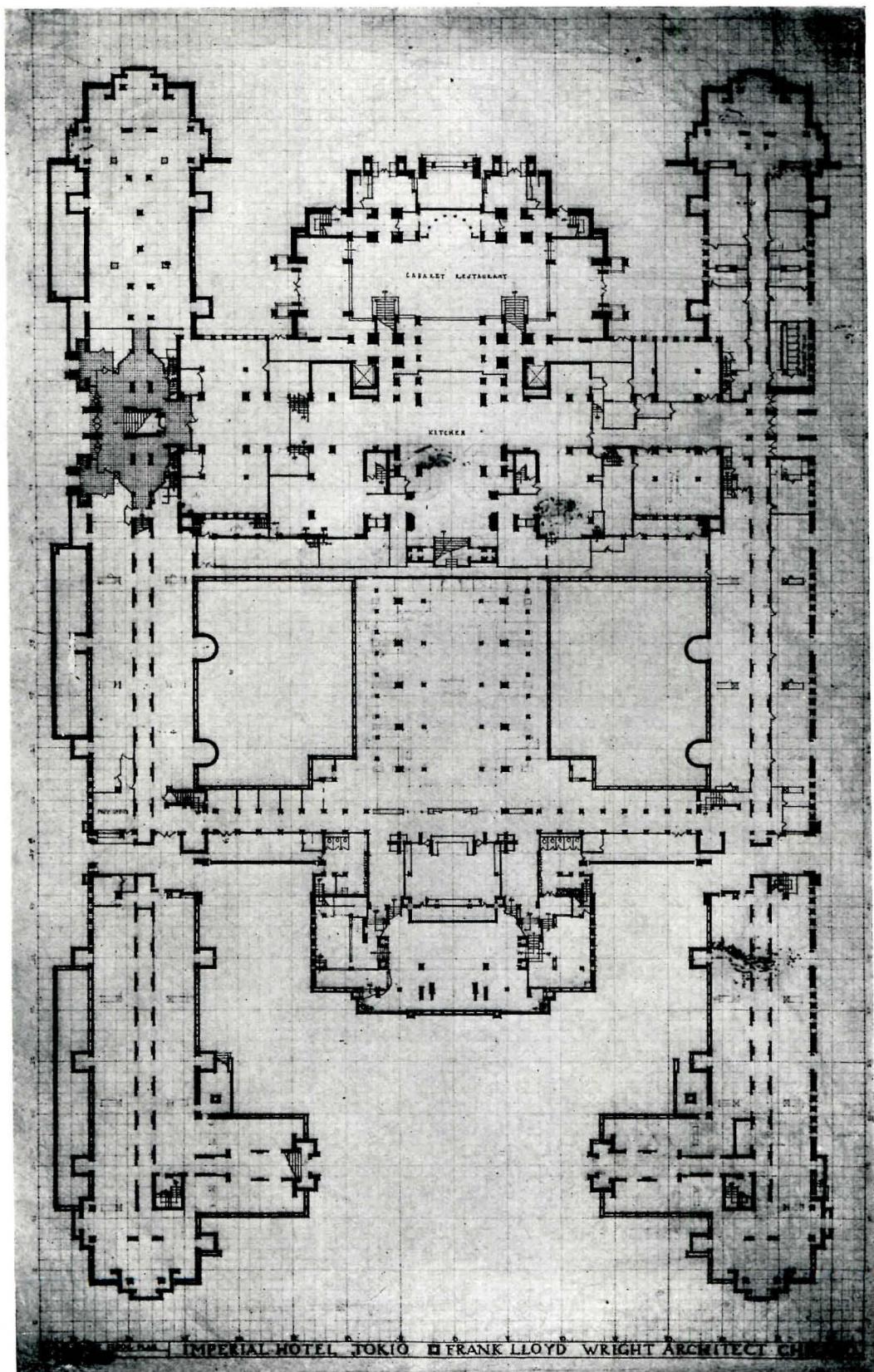
I have chosen three hotels that are neither very large nor very small as examples for a further discussion of the planning of resort hotels. These are widely separated, are different in design character, and all have certain marked characteristics in common. They are The Imperial Hotel at Tokyo, Japan, The New Colonial Hotel at Nassau, The Bahama Islands, and The Bon Air-Vanderbilt at Augusta, Georgia.

The main characteristics of this type were pointed out in the first part of this article which appeared



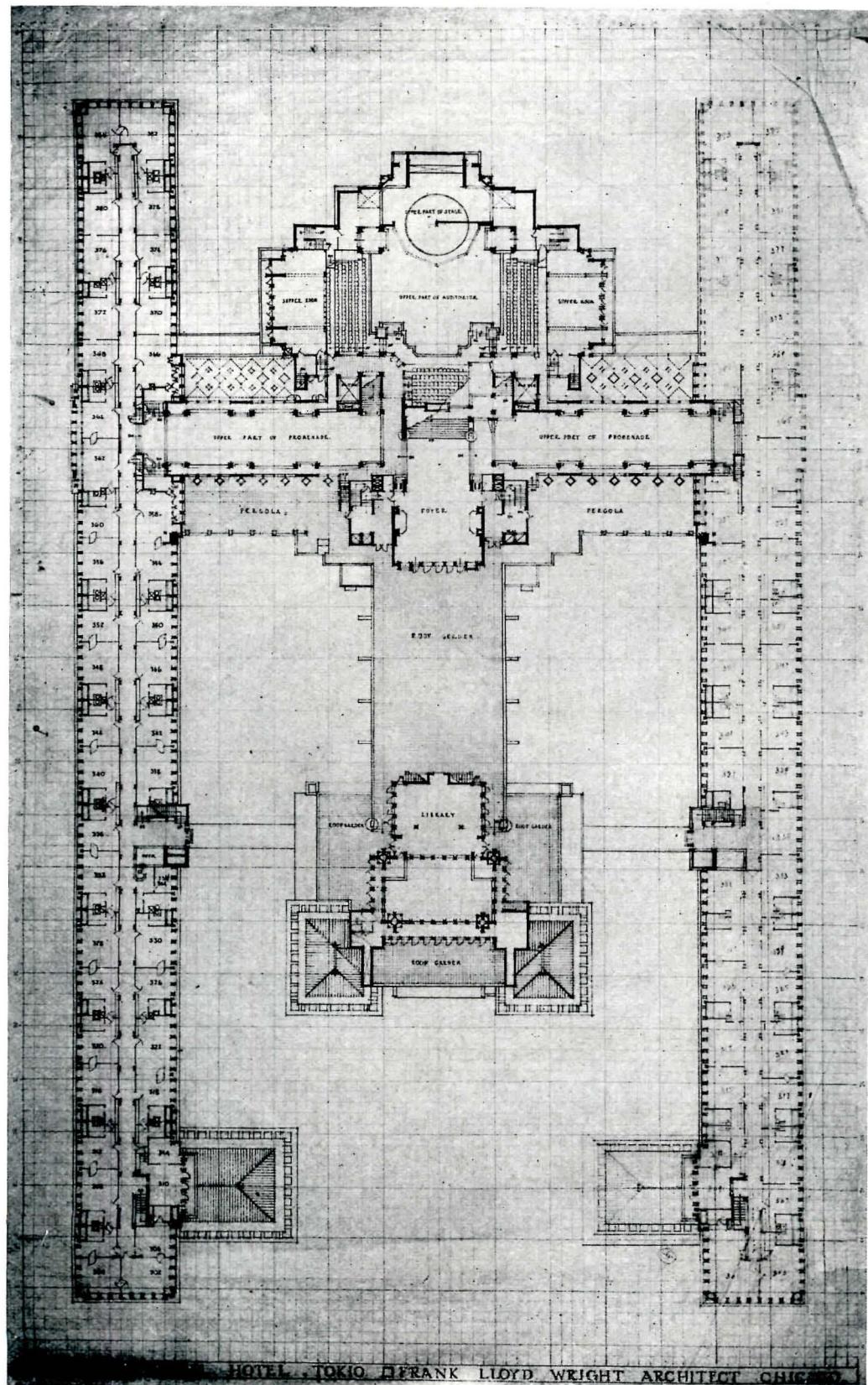
*General View of The New Colonial Hotel, at Nassau, Bahama Islands.
Kenneth M. Murchison, Architect.*

PENCIL POINTS

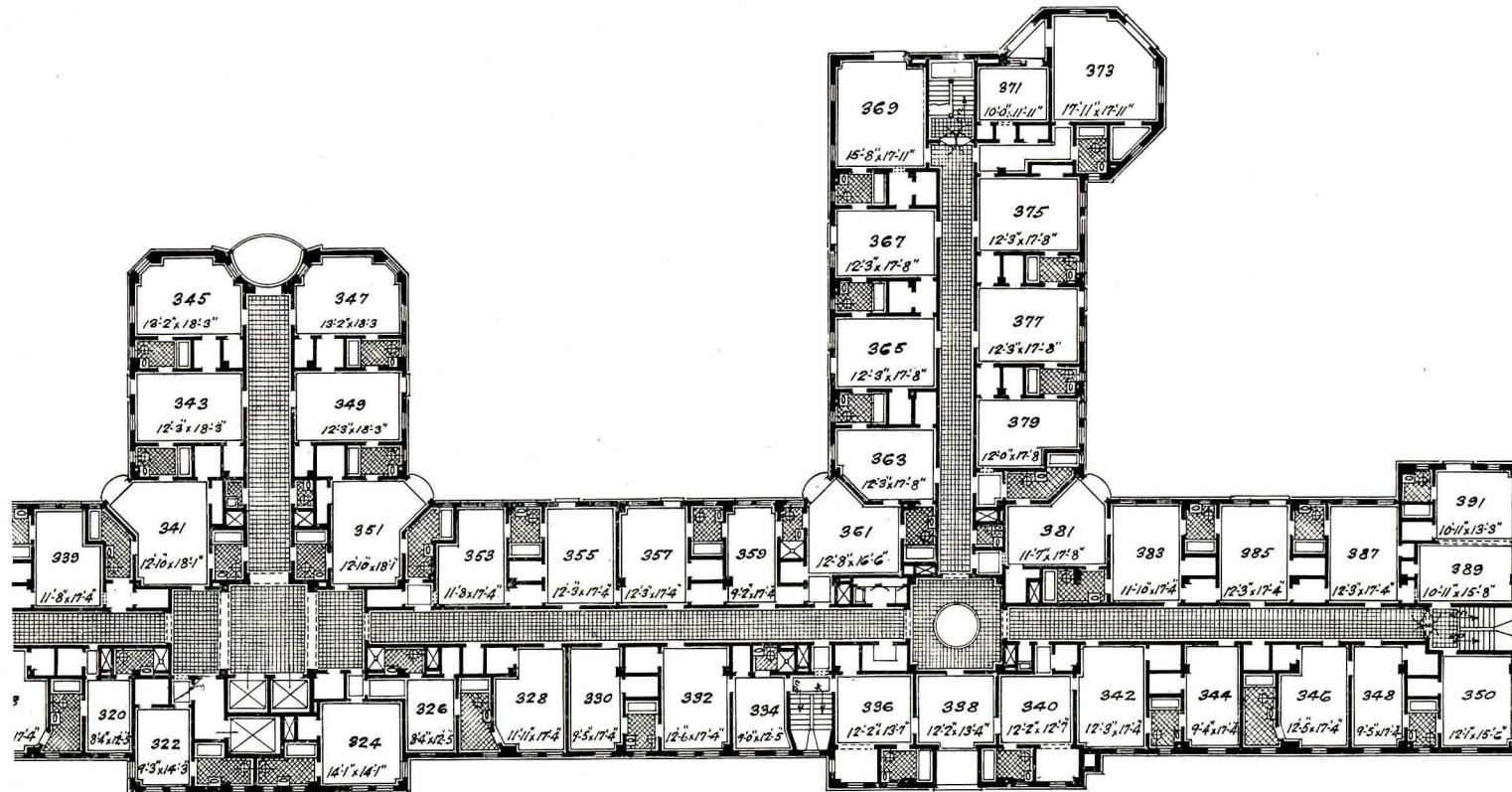


*Basement Floor Plan. Imperial Hotel, Tokyo.
Frank Lloyd Wright, Architect.*

PENCIL POINTS



*Loggia Floor Plan. Imperial Hotel, Tokyo.
Frank Lloyd Wright, Architect.*



Portion of Third Floor Plan, The New Colonial Hotel, Nassau, Bahama Islands.

Kenneth M. Murchison, Architect.

PENCIL POINTS

in the June issue of this magazine. It is my purpose in this issue to go more fully into the matter of the practical requirements in planning of resort hotels, taking as examples for discussion three recent hotels—each excellent in its way and suited to its locality, and all widely separated.

These hotels are The Imperial Hotel, Tokyo, Japan—The New Colonial Hotel at Nassau, The Bahamas—and The Bon Air-Vanderbilt Hotel at Augusta, Georgia.

A photograph of The Imperial Hotel at Tokyo appeared in the June issue. In this issue are shown reproductions of the plans of the three lower floors.

At the outset it is well to recognize that The Imperial Hotel of Tokyo is not only a tourist hotel, but has combined with its accommodations for tourists very elaborate and especially well planned facilities for handling social functions. This is a very important feature of the service this hotel renders, for it provides a suitable and convenient place for holding the many social functions and for the less formal entertaining incident to the official and business life of the capital.

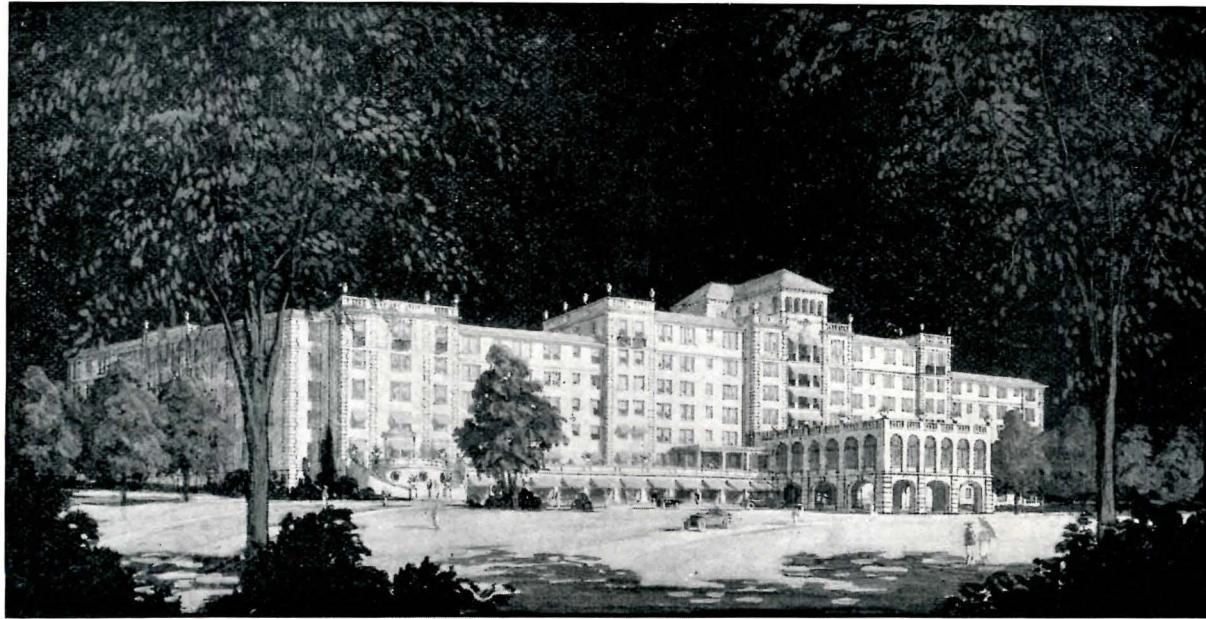
So we have here two interlocking sets of requirements. As a hotel for transient guests it has not only the advantage of an interesting and unusual exterior design, but a type of plan that adds to its interest and charm. By referring to the plan on page 52, it will be seen that the bedrooms are arranged in double rows with a corridor between, and that the wings are so widely separated that all of the rooms are in truth outside rooms. It will be noted also that the bathrooms are in all cases outside rooms. This is quite the reverse of the growing practice in the planning of commercial hotels where, as was mentioned in the July issue of this journal, inside bathrooms are becoming the

rule. In favor of the outside bathroom for a resort hotel, it may be said that since the same restrictions are not placed upon the area of the plot that arise from the high cost of land in cities, the resort hotel usually spreads over much more ground and is correspondingly fewer stories in height than the commercial hotel providing the same number of rooms. This being the case, it is desirable to make the courts as wide as possible and the wings of the hotel narrow. Using outside bathrooms placed between the bedrooms helps in the accomplishment of this purpose. Most travelers find the inside bathroom entirely satisfactory in a city hotel, but there is a feeling that is perhaps well-grounded that the same people when stopping at a resort hotel prefer the impression of light and air conveyed by an outside bathroom.

Referring to the basement floor plan on page 54, it will be seen that the kitchen of The Imperial Hotel at Tokyo is centrally located in relation to the main dining room and the private dining rooms on the floor above and to the cabaret restaurant which is just back of the kitchen and at a somewhat lower level. Depressing the kitchen in this way has made it possible to place the theatre on the main floor level at the head of the main axis and with its entrance from the Grand Promenade which crosses this axis at right angles and is one of the main features of this hotel.

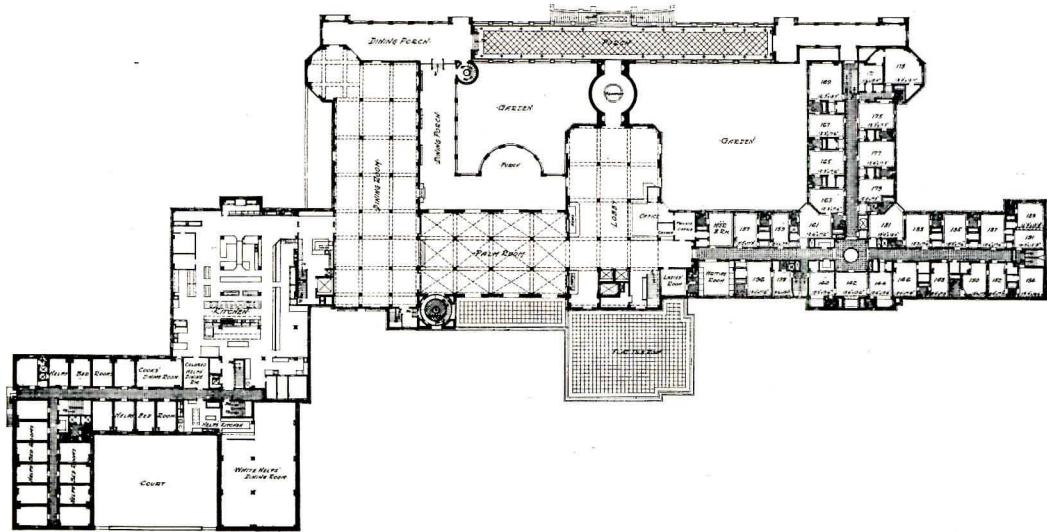
It is also to be noted that further means of crossing from side to side of the hotel are provided by the north and south bridges at the main floor level. The main entrance of the central portion is so planned and is of such architectural character that it is hospitable and impressive and has the gala spirit appropriate to the purpose.

(Continued on page 62)

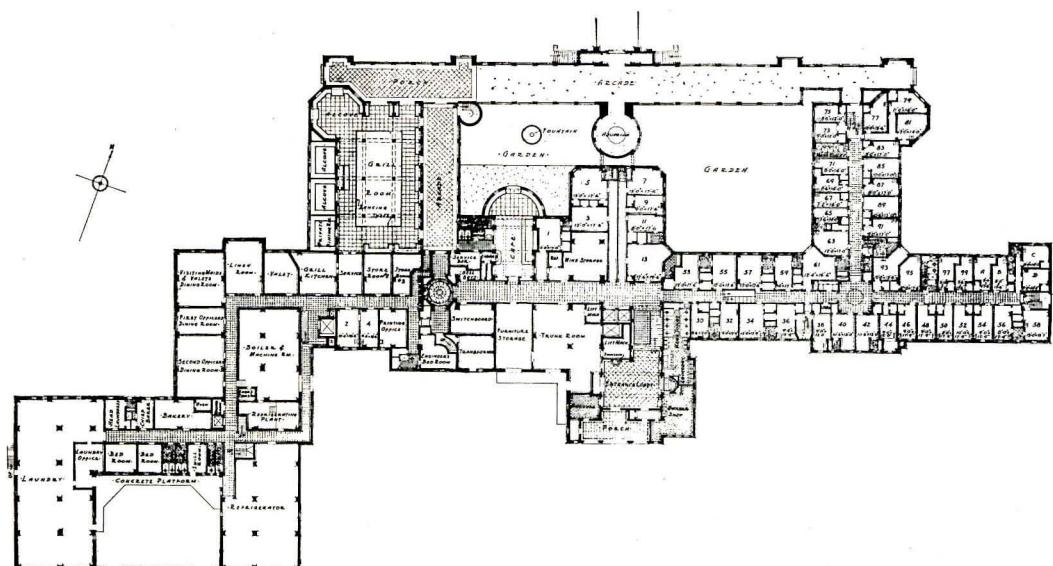


The Bon Air-Vanderbilt Hotel, at Augusta, Georgia. Willis Irvin and McKim, Mead & White, Associated Architects.

PENCIL POINTS



First Floor Plan.

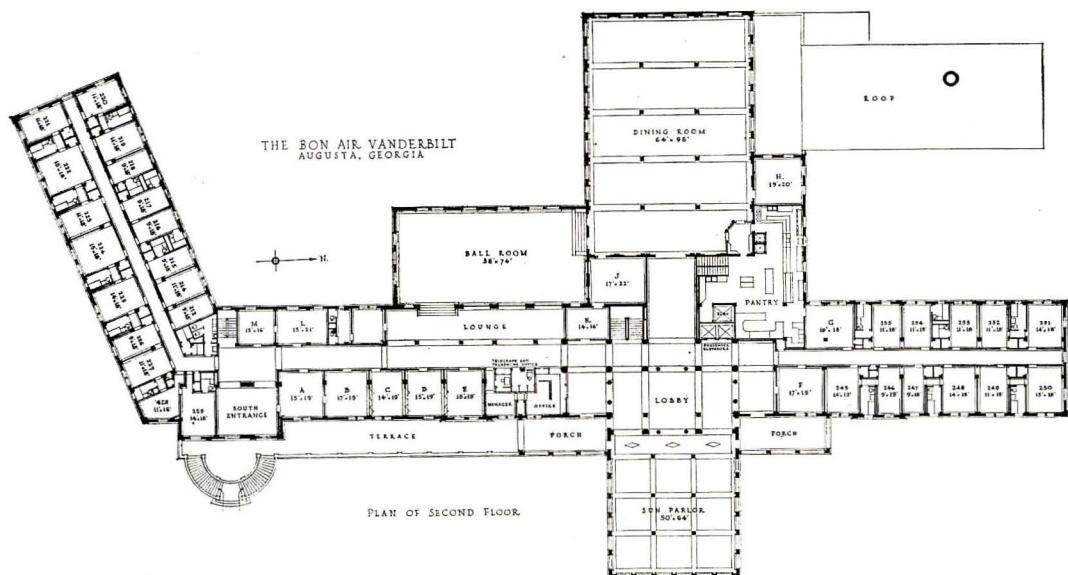


Ground Floor Plan.

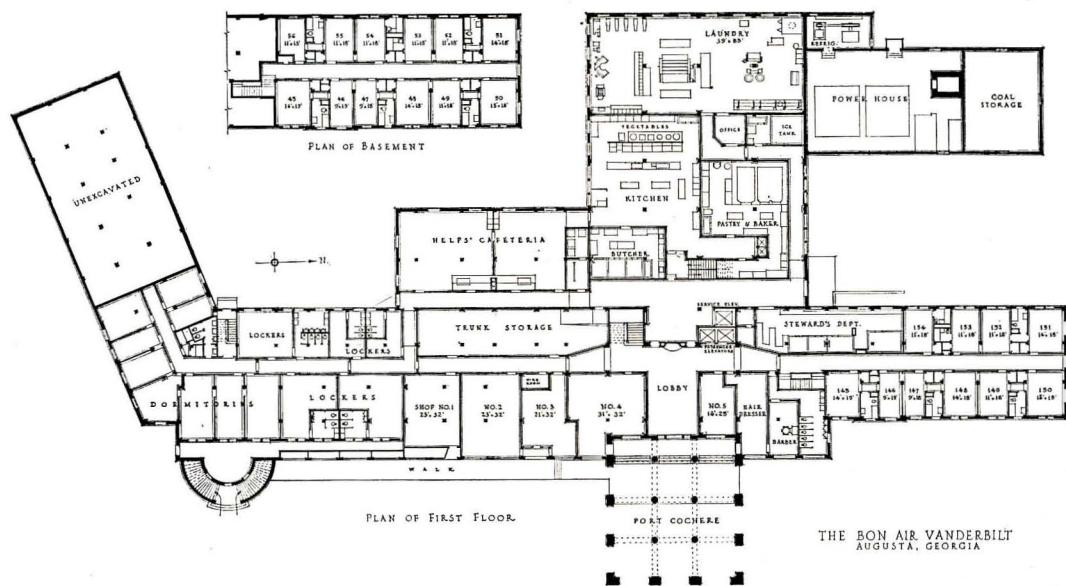
The New Colonial Hotel, Nassau, Bahama Islands.

Kenneth M. Murchison, Architect.

PENCIL POINTS



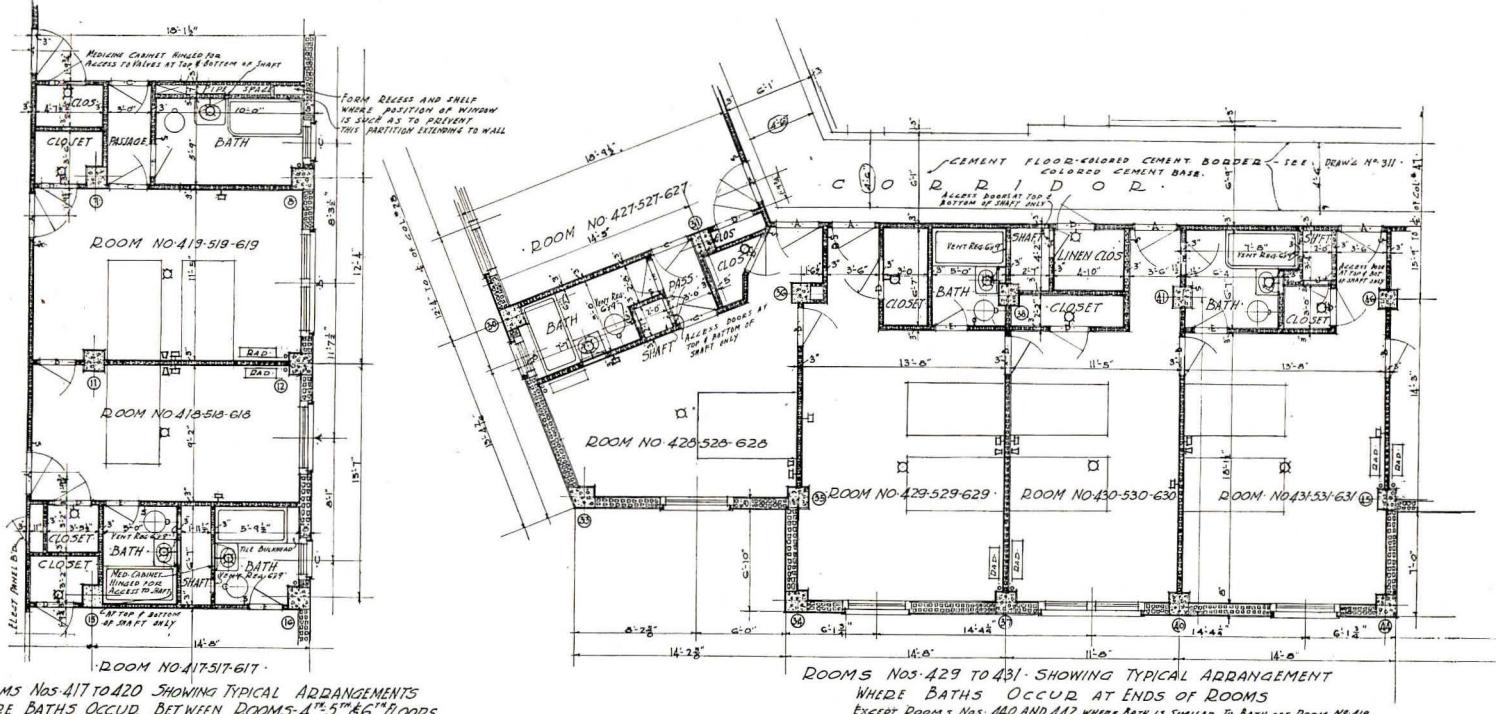
Plan of Second Floor.



Plan of First Floor.

The Bon Air-Vanderbilt, Augusta, Ga.

Willis Irvin and McKim, Mead & White, Associated Architects.



Various Types and Arrangements of Rooms. The Bon Air-Vanderbilt, Augusta, Ga.

Willis Irvin and McKim, Mead & White, Associated Architects.

PENCIL POINTS

Published Monthly by

THE PENCIL POINTS PRESS, Inc.

Publication Office — Stamford, Conn.

Editorial and Advertising Offices — 19 East 24th Street, New York

RALPH REINHOLD, President F. W. ROBINSON, Treasurer
EDWARD G. NELLIS, Vice President and Secretary
EUGENE CLUTE, Editor W. V. MONTGOMERY, Business Manager
RAY D. FINE, Advertising Manager

Copyright, 1923, by The Pencil Points Press, Inc.

Subscription rates per annum, payable in advance; to The United States of America and Possessions, Argentina, Bolivia, Brazil, Colombia, Costa Rica, Cuba, Dominican Republic, Ecuador, Guatemala, Honduras (Republic), Mexico, Nicaragua, Panama, Paraguay, Peru, El Salvador, Spain and Colonies (Balearic Islands, Canary Islands and Spanish possessions on the north coast of Africa), and Uruguay, \$2.00. Single copies, 25 cents. Canadian Subscription, \$2.50. Foreign countries not mentioned above but in the Postal Union, \$3.00. Payment for foreign subscription should be made by International Money Order or American Express Money Order, drawn in terms of United States Funds.

All Subscribers are requested to state profession or occupation.

In changing address, please send old as well as new address.

AMERICAN ACADEMY IN ROME.

FROM a letter recently received by Mr. C. Grant LaFarge, Secretary of the American Academy in Rome, from Frank P. Fairbanks, Professor in Charge, School of Fine Arts, we quote the following:

In the past month we held our eighth Annual Spring Exhibition. The School of Fine Arts "hung" about eighty works. On the 16th of the month the King of Italy officially opened the Exhibition. He was received by the American Ambassador and his staff, the Director and faculty of the Academy. After the simple formality of receiving the students he spent three-quarters of an hour viewing the works of both Schools. One or two works by Manship, the project for the Thrasher-Ward memorial, and a publication by Professor Frank, as well as the new Japanese acquisition in our Museum, attracted the special attention of the King.

On the afternoon of the 17th the public opening of the Exhibition took place beginning with a lecture on Italian Gardening and its Relation to the Profession of Landscape Architecture, by Ralph E. Griswold, landscape architect. This was followed by the rendering of a program of original compositions by the Fellows in the Music Department. Hanson and Thompson conducted the orchestra from the Augusteo; Sowerby played one of the two piano parts of his own Ballade.

The cortile was temporarily covered by canvas to provide against the exigencies of the weather. A platform for the orchestra was erected at the south end of the cortile and seats were arranged for about 500 persons.

Salvatore Lascari, former Fellow in painting, has returned to Rome to prepare cartoons and execute mosaics in co-operation in some work for Mr. Blashfield. Because of his inability to procure a studio of adequate height for his thirty-foot cartoons we are allowing Lascari temporary use of one of the unoccupied sculptor's studios. Thereby we are also profiting by his experience in fresco painting, which he is offering generously for the work which Prof. Faulkner is doing in the cortile.

Of the work of the men, Griswold has completed his academic requirements and will shortly start on his final tour of travel north through Italy, to France and England, until his final sailing at the end of September.

Smith, senior architect, is busy with a thesis on his Temple of Zeus at Olympia, developing full size details and laying out his work on the Villa Catena.

The news of the award in sculpture to Alvin Meyer was very welcome out here. Meyer is a modest fellow and serious worker with an excellent feeling for decoration in his work. He has been helping Manship on some of his things and is occupying Manship's studio while carrying on some of his own projects.

Mr. Walter H. Rothwell, Conductor of the Philharmonic Orchestra of Los Angeles, in a letter to Howard Hanson, writes regarding a cycle of concerts of the work of American composers, "Your symphonic Poem had much success and personally I consider it the most important work we did on the program."

LIFE DRAWINGS BY STUDENTS.

TWO figure studies from the annual exhibition of students' work at Pratt Institute, Brooklyn, N. Y., are illustrated in this issue.

The drawing reproduced below is by Miss Ruth Harper who made it as part of her work in the Second Year Costume Illustration course under the instruction of Lewis Palmer Skidmore. It is one of the drawings made primarily for the purpose of rendering the costume designer more conversant with the human figure. Miss Harper's drawing shows extraordinary ability both in artistic perception and in drawing. It is much more than a mere study of the model and has charm. Miss Harper is now continuing her art studies in France, having sailed shortly after the closing of the school year.

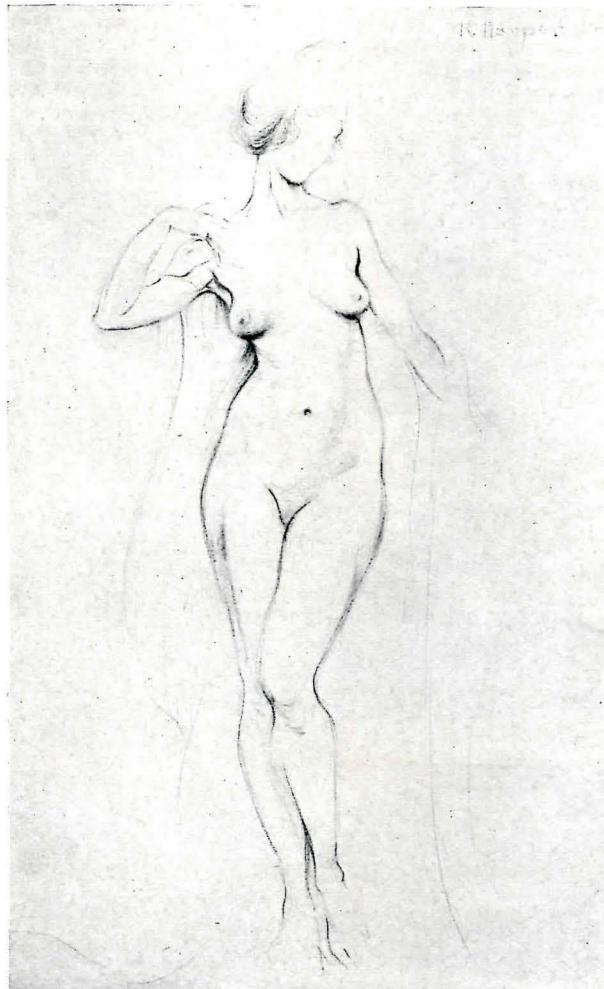


Figure Study by Miss Ruth Harper.

PENCIL POINTS

On this page is reproduced a drawing also by a student at Pratt Institute. This is a group of figure studies by Miss Ruth Harris, a third year student in General Art, under the instruction of Frederick Van Vliet Baker. These quick action sketches are made for the purpose of making the eye of the student more rapid in seizing essentials, and to improve the faculty of expressing action. Ten minutes or so are given to the drawing of each figure. This work supplements drawing of a more careful character, in which several hours are allowed for a single pose, and work in modelling from the figure.

HOTEL ARCHITECTURE FROM A HOTEL MAN'S VIEWPOINT.

(Continued from page 57)

The New Colonial Hotel is another well-planned hotel of the resort type. Here we find the same comparatively narrow wings with bedrooms arranged on either side of a long corridor and outside bathrooms.

A feature that contributes to the comfort of guests is the type of bedroom door used. Each of the doors has a large panel filled with louvers, permitting the circulation of air through the rooms and at the same time providing the necessary privacy. This opening can be closed by a hinged panel which swings into the room.

Ground floor and first floor plans of this hotel are shown on page 58 and a general photographic view is to be seen on page 53. This hotel is so planned that a view of the ocean can be had from most of the rooms. A feature of the plan designed to meet the requirements of the majority of the guests is found from the fact that there are a great many suites consisting of a double room with an adjoining single room and bath. With each room is a large closet in which may be accommodated a wardrobe trunk. There are two public bathrooms on each floor, located near elevators for those guests who arrive at the hotel in the morning and must wait for their rooms. This arrangement may be seen clearly in the portion of the third floor plan reproduced on page 56.

The kitchen is on the first floor adjoining the main dining room, from which open spacious dining porches and a large palm room. The palm room in turn adjoins

the lobby. This arrangement provides very effective vistas through the principal rooms. The grille room is on the ground floor.

As was mentioned in a previous installment, it is important always to so plan a hotel that the building may be expanded without the necessity for tearing down much of the original work. In the case of the New Colonial the architects have made provision for the building of additional rooms in such a way that the principal rooms will not have to be disturbed in altering to keep pace with the increased capacity of the hotel.

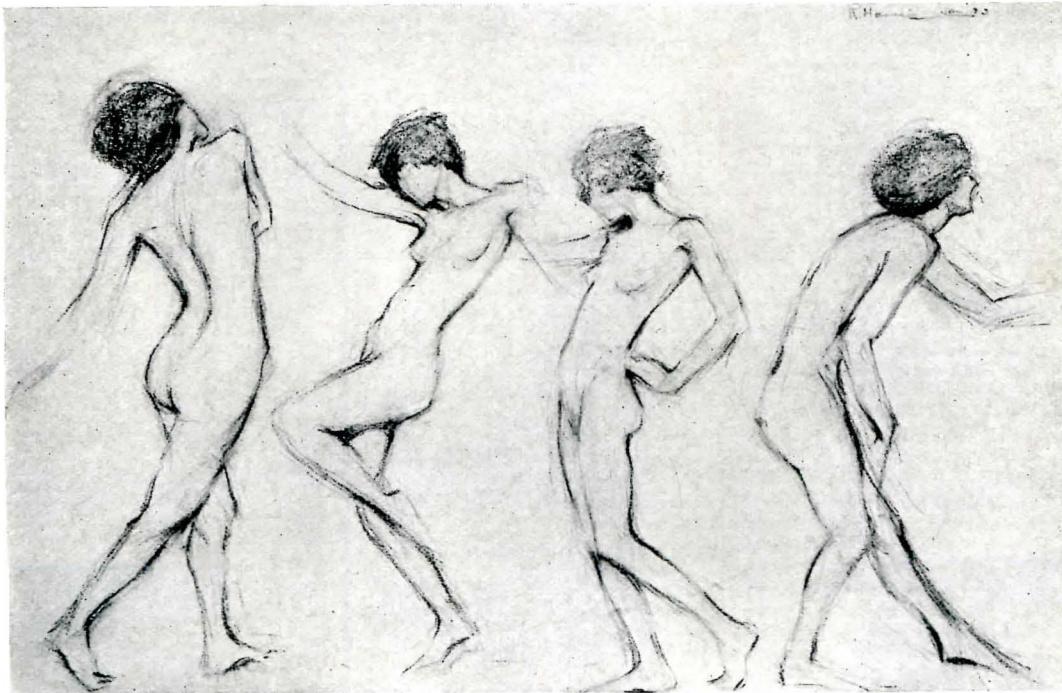
One of the interesting minor features of this hotel is the lobby through which bathers reach the beach from the hotel. The walls here are decorated with under-sea pictures and there is an aquarium eight feet in diameter.

In the plans of The Bon Air-Vanderbilt Hotel we once more find the rooms arranged in a double row along the corridor and outside bathrooms in general. On page 60 will be found plans of bedroom floors showing both the typical arrangement where baths occur between the rooms and the special arrangement adopted where baths occur at the ends of rooms.

Here the kitchen is directly under the main dining room and the entrance is through a port-cochère at the ground or first floor level. This port-cochère is spacious and with the sun parlor above provides an impressive entrance to the lobby at this level, from which the second or main floor is reached by elevators or by a stairway. The main lobby is lighted by windows above the level of the roof of the solarium. This lobby together with the lounge and solarium form an especially attractive group of principal rooms, with a vista over two hundred feet long from the solarium through the lobby to the extreme end of the main dining room. The lobby and solarium have wicker furniture and are decorated very attractively.

This hotel was opened in January, 1922, with 300 rooms. The work of making additions is now in progress under the direction of Willis Irvin and Warren & Wetmore, Associated Architects. The wing at the north is being extended to provide 100 additional bedrooms; a new dining room is being added to the west end of the main dining room and a lounge is being built at the south end of the ballroom.

(To be Continued)



Quick Action Sketches by Miss Ruth Harris.

PENCIL POINTS



ERNEST E. WEIHE

ERNEST E. WEIHE, winner of the Paris Prize of the Society of Beaux-Arts Architects in 1919, recently returned from his studies abroad.

Mr. Weihe was born in California and he entered an architectural office in San Francisco in 1907, doing office work part of the time and attending the classes of the San Francisco Institute of Art. Later he took up the work of the Beaux-Arts Institute of Design at the Atelier of The San Francisco Architectural Club under the patronage of Arthur Brown, Jr.

In 1912-13 he worked for the Panama-Pacific International Exposition Company under Edward H. Bennet, Jules Guerin, George W. Kelham and other well known members of the Commission. In 1913 he became connected with the office of Bakewell & Brown, and continued to follow the program of the Beaux-Arts Institute of Design. He was awarded the diploma in 1918, won prizes in the Warren, Loeb, Pupin and other competitions, also won a competition for a traffic solution for the foot of Market Street, San Francisco, including ferry buildings, boat landings, docks, etc., also won competition for design for Aquatic Park in San Francisco Bay, which is now being carried out.

Mr. Weihe worked under the criticism of Harvey W. Corbett and Maurice Prevot and won the Paris prize in 1919.

He worked for several months for Dennison & Hiron and sailed for Europe in 1920. He followed the courses of the Ecole des Beaux Arts in the atelier of MM. Laloux and Lemaresquier. He also did several competitions in the office of M. Paul Bigot and spent a great deal of time studying the latter's model of Rome.

Mr. Weihe travelled in France, Belgium, Holland, England, Italy, Spain and Switzerland, for the most part on a bicycle, making many sketches, two of which are reproduced on a plate page in this issue.

Mr. Weihe returned in May and is once more in San Francisco with Bakewell & Brown.

THE MAKING OF WORKING DRAWINGS.

(Continued from page 48)

work, as actually made from this drawing, fit the work. Experienced superintendence by the architect and the contractor is most necessary in order that the work may be properly set and trimmed, or to look out for the proper rigging, slinging and setting.

Figure 6 shows an interesting shop drawing covering part of a terra cotta façade for a banking building, erected in Japan. Note how all the pieces of terra cotta are clearly indicated. The types and sizes are noted. The anchors and bearings against the concrete structure are well indicated. In checking a drawing of this kind, perhaps the most important part to look out for is any deviation of design from the architectural drawings, figures of main openings and principal features. It is not so necessary to check for building up of, or securing of, the terra cotta work to the structural work. Due to their technical and expert knowledge the manufacturers are in the best position to foresee and provide for structural difficulties and overcome them.

Figure 7 also is a terra cotta shop setting drawing for a school entrance door feature. This is an excellent shop detail. The building up of the various pieces are clearly shown and numbered, also showing the relation to the tying into structural work, anchors shown, the columns are designed for their own structural support. Quite frequently a great part of the structural design of work such as this drawing illustrates, is left to the manufacturer. As a rule, when the work is in the hands of expert manufacturers, much should be left to their judgment and knowledge. They will follow the architectural details carefully for design and the architect need have no fear as to proper manufacture and structural strength.

During the construction of the New York Public Library on Fifth Avenue, many of the shop drawings were prepared in temporary offices provided for the contractors near the architect's office. This was a great help both to the contractor's staff, who prepared the shop drawings and the architectural draftsmen. Consultations were frequently held, records of drawings and specifications were easily available and much sending to and fro of drawings between the contractor and architect was eliminated. This method of having shop drawings prepared in the architect's office, has since been worked out with good results and this form of co-operation between architect and contractor has been very successful.

PERSONALS

ALBERT SCHROEPFER, Architect, has removed his offices to the Foxcroft Building, 68 Post Street, San Francisco.

RUSSELL F. WHITEHEAD has removed his offices to 150 East 61st Street, New York.

WILLIAM C. FURER and WILLIAM POTTER have become associated under the firm name of Furer & Potter for the general practice of architecture and architectural engineering with offices in the Hawaiian Trust Building, Honolulu.

EDWARD C. NOWERS BRETT has opened an office for the practice of architecture at 502 Slavin Buildings, Pasadena, California.

LESTER B. EDWARDS has become associated with Frost & Chamberlain, Architects, the firm now being Frost, Chamberlain & Edwards, 1006 Slater Building, Worcester, Mass.

CHARLES M. HART has removed his offices to the Park-Lexington Building, 247 Park Avenue, New York.

THE SPECIFICATION DESK

A Department for Specification Writers

SPECIFICATIONS FOR CRITICISM.

ACTING on the suggestion of one of our readers, Mr. M. N. Nirdlinger of Nirdlinger and Marlier, Pittsburgh, we have secured a set of architect's specifications for a brick and hollow-tile residence and we are printing this set of specifications in order that they may be criticised by our readers. Last month we printed the fourth installment and in this issue we continue. The object in doing this is to provide material for a discussion that will be helpful to all who have to do with the preparation of specifications by showing up the weak points in this set of specifications.

You are invited to join in and help rip up these specifications. We are withholding the name of the architect from whom we borrowed these specifications and he has entered into the spirit of the thing so you may feel at liberty to criticise them as severely as you like. We hope that you will also present many suggestions for improvement. The good resulting from this discussion will be in proportion to the number of men who join in with criticisms and suggestions, so we ask that you do not depend on the other fellow doing it but write us yourself, then the thing will be a success. Here is another portion of the specifications—let's have your criticism.

CARPENTER WORK.

(Continued)

BREAKFAST ROOM CHINA CLOSETS:

China closets at breakfast room will be built of design shown and per full size details, which includes a moulded bottom shelf with apron under same, moulded architrave, stiles, $\frac{3}{8}$ " doors and moulded shelves. The lining for above china closets to be made up of yellow pine beaded boards and it will be noted that the face of china closets is flush with plaster wall below china closets. The above china closets to be well framed and glued and to be assembled at the mill ready to set in place at the building. Loose moulds to be provided on above china closet doors which will be set in place after is installed.

CUPBOARDS, CLOSETS, ETC.:

Cupboards, closets, etc., including drawers under kitchen sink drain board, to be built where shown on plans and as per preliminary detail sheet and as per full size details. Said cupboards, closets, etc., will have drawers, shelves, clothes poles, etc., as called for.

Doors in all cases to be $\frac{3}{8}$ " thick and are to be provided with loose wood moulds where glass panels are called for. Shelves to be $\frac{3}{8}$ " thick. Poles to be $1\frac{1}{2}$ " in diameter. Countertops of cupboards to be $1\frac{1}{8}$ " thick with moulded nosing. Above cupboards to be constructed in the most approved manner. Shelves shall be supported on metal pins, they to be made adjustable. All drawers to be constructed in the most approved manner. All metal pins to be furnished by contractor for mill work.

LINEN CLOSET HINGED FRONT CASE:

Case at second story linen closet to be built to a height of five feet consisting of shelves with hinged fronts, the fronts to be hinged at the bottom. At the five foot height above cases will have moulded countertop. The case will be lined with flooring and will have baseboard continue across front. The above to be as suggested on drawings and per full size details.

CLOSET SHELVING:

All closets to be provided with the number of shelves

called for on drawings and with $\frac{3}{8}$ "x4" moulded clothes strip and $1\frac{1}{4}$ " poles.

CLOTHES CHUTE:

This contractor will figure on furnishing clothes chute per drawings and details. Doors are specified under heading of doors. Clothes chute to be lined its entire length with one width yellow pine boards or flooring which shall be properly braced affording a perfectly smooth surface inside. At basement this contractor will include receiving basket built up of $\frac{3}{4}$ "x2" material with space between boards sufficient for ventilation. Above will be clearly shown on full size details.

CELLAR PARTITIONS, ETC.:

Cellar partitions where marked on drawings to be built of yellow pine tongued and grooved flooring 3" on face with 1x3" surfaced pine at base, center and at ceiling. The strips will occur on one side only and will run around all door openings on both sides forming jambs for the doors. Coal bin partition will be lined on both sides of the 2x4" studding. Studding to be spaced 16" o. c. This contractor will include all closets in cellar as called for on drawings and will provide shelves, etc., as called for.

PAINTING AND GLAZING:

NOTE:

For kinds of woods used throughout building see drawings and pages 32 and 33.

This contractor will furnish all materials and labor necessary to complete the work included in this department of said building, in a workmanlike manner. All materials are to be just as specified with no substitution or adulteration. All materials are to be delivered at the building in sealed cans, and passed upon by the architect.

Examine all woodwork before first coating it, and if it is not in a suitable condition to paint or varnish as required, report to architect before first coating it and await his instructions. This contractor is to include the finishing of all woodwork done by the carpenter and mill work contractors, and this painting contractor must inform himself by reading their specifications also all metal and tin workers' specifications.

All pumice stone and oil and water used in rubbing must be thoroughly cleaned off. Also all spots, smudges or finger marks from woodwork that is to be varnished, before applying first coat; also all paint and varnish that gets on hardware, glass or other places where it is not intended. OO sand paper to be used where sand paper rubbing is called for.

Furnish white lead to carpenter who will put it on kitchen wood porch flooring at tongues and grooves as floor is laid.

The varnish, paint and enamel must be applied with suitable brushes, in a manner that will not show brush marks, and all painting and varnishing must be free from sags or runs, and must be smoothly and uniformly brushed out.

All nail holes and slight defects of interior finish are to be puttied up with putty, colored to exactly match the wood when finished. No oily rags or waste to be left in the building over night. Exterior ornamental iron work shall receive one coat of approved black iron paint at completion of the building.

Follow the work of the carpenters each day, shellac all knots and prime all finished woodwork, (unless it is specified to be stained) the day it is put in place. The window and door frames are to be primed at the shop or mill. The above priming coat to be composed of pure linseed oil and white lead and dryers, using a larger percentage of oil.

(To be Continued)